# SOUTHEASTERN ALASKA STREAM CATALOG FOR REGULATORY DISTRICT No. 9

by Norman Johnston

Marine Biological Laboratory
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UNITED STATES DEPARTMENT OF THE INTERIOR

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Edited by

Norman Johnston

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# CONTENTS

	Page
A bstract	1
Introduction	2
Sources of data	2
Limitations of data	2
Escapement estimates	2
Explanation of catalog format	3
Stream designations	3 5
Upstream	5 6
Weir record	6
Mapping symbols	7
Alphabetical index of salmon streams	8
Numerical index of salmon streams	10
Map of stream locations	12
Map of Regulatory District No. 9	13
Stream descriptions No F 25A to No F	40.4

# STREAM CATALOG OF SOUTHEASTERN ALASKA REGULATORY DISTRICT NO. 9 ½/

Edited by

Norman Johnston Alaska Department of Fish and Game Juneau, Alaska

# ABSTRACT

Information about part of Southeastern Alaska salmon streams is cataloged from the voluminous records of the Alaska Department of Fish and Game; the Alaska Salmon Industry; the Fisheries Research Institute of the University of Washington; the U.S. Fish and Wildlife Service, Bureau of Commercial Fisheries; and other agencies. Stream descriptions, maps, and historical records of salmon escapement data are compiled for 53 salmon streams in Southeastern Alaska Regulatory District No. 9. Each stream is located geographically by latitude and longitude and by orientation to prominent landmasses. A standard numbering system, number designations formerly in use, and common names of each stream are listed. Physical descriptions are presented for the intertidal zone and the upstream area of each stream. Available records of weather, water temperatures, and information useful to ground and aerial stream surveyors are presented in brief form. The species of salmon using the spawning grounds and estimates of the escapements each year for many years are given.

# INTRODUCTION

The pink salmon of Southeastern Alaska are an important fishery resource. Millions of these fish are captured annually by the commercial fishery during their spawning migration. There are more than 1,100 known spawning streams, plus hundreds of small, individually unimportant ones, scattered along the 9,000 coastal miles of Southeastern Alaska.

1/ Contribution No. 195, College of Fisheries, University of Washington, Seattle, Wash. This is the fifth catalog of salmon streams of Southeastern Alaska. Previous catalogs cover areas as follows: Reg. Dist. No. 1, SSR--F 305; Reg. Dist. No. 2, SSR--F 453; Reg. Dists. Nos. 3 and 4, SSR--F 465; and Reg. Dists. Nos. 5, 6, 7, and 8, SSR--F 523.

For many years, management and research agencies of the Federal, Territorial, and State governments, Alaska salmon canners, and the Fisheries Research Institute of the University of Washington, have independently conducted stream surveys of the salmon spawning grounds. A vast amount of valuable information has been accumulated and has been, in the main, kept on file in the offices of the various organizations.

To make full use of all these scattered materials, records from the various sources have been gathered together and methods of stream surveying have been studied on a comparative basis. This information has been consolidated into a standard form which is presented here as a stream catalog.

This catalog has been compiled under a contract given to the Fisheries Research Institute by the United States Fish and Wildlife Service. The material contained herein includes 53 major and numerous minor streams of Regulatory District No. 9.

Information on each stream is presented by a stream description and, when available, a map, and escapement record. Information pertinent to the identification of each stream by name, number, and location is given, and further physical features are described where necessary for positive identification. Descriptions of each stream are given as completely as available information allows. The catalog format is so designed that future surveys by various agencies can be recorded and conducted according to a uniform style.

As a handbook of salmon streams, this catalog is expected to serve as an aid to conservation agencies as well as others who have an interest in the valuable salmon resource of Southeastern Alaska.

#### SOURCES OF DATA

The information compiled in this catalog is derived from a number of sources, both in and outside of the field of fishery work. A complete list of these sources is given below.

Alaska Department of Fish and Came. Valuable stream and escapement information is available in reports by research and management personnel.

Alaska Salmon Industry. Surveys (made by individual members of the industry) are among some of the earliest records available.

Fisheries Research Institute. Records are available for each year starting with 1947. Many of the Institute research projects have been concerned with precise measurements of physical factors. Data from these projects provide some of the stream descriptions and escapement estimates included in this catalog. In 1950 and 1951 the Institute assembled a stream catalog for Southeastern Alaska with all the information then available. It has served as a guide for the present catalog.

U.S. Coast and Geodetic Survey. Charts used throughout the catalog for standardization of stream location coordinates are from this source. A number of large-scale charts have provided intertidal zone information. The U.S. Coast Pilot (1952, Southeast Alaska, Dixon Entrance to Yakutat Bay, Tenth Edition, 544 p., plus charts) is the source of information on vessel approaches to stream mouths and the authority for spelling of proper names.

U.S. Fish and Wildlife Service. District catalogs of this agency are a major source of stream physical data and salmon escapement records. Escapement records from the streams where weirs were operated are actual counts. The FWS stream numbering system is the basis for the numbering system used in this catalog. Information on some of the large mainland streams with headwaters in Canada was obtained from the Canadian government by the U.S. Fish and Wildlife Service.

U. S. Federal Power Commission. The report, Water Power of Southeastern Alaska, 1947, published with the cooperation of the U. S. Forest Service, provides discharge rates and stream drainage areas, and other information about a number of important salmon streams.

<u>U. S.</u> Forest Service. Data on stream characteristics and salmon escapements are available on several streams in records of studies conducted by this agency's studies on the effects of logging on the physical makeup of streams.

U.S. Geological Survey. Aerial photographs from this agency are the primary source for measurements of stream distances and areas and for valley features not visible from the ground. These photographs, which are of most of the streams in Southeastern Alaska, were made by the U.S. Navy (Patrol Squadron Four) in 1948.

Local residents. Another source is the descriptive information on several major streams provided by local residents.

#### LIMITATIONS OF DATA

Escapement estimates obtained by visual means are often limited in accuracy because fish are not seen in turbid water, under overhanging streambanks, or in areas inaccessible to observers. Actual counts throughout the duration of the salmon run past a counting weir or tower are relatively accurate estimates of total escapement. However, it is not economically feasible to establish a weir on each stream, and escapement surveys are the only source of information for a large part of the area which must be covered. The value of the catalog as a history of the salmon escapements can be realized only if its limitations are fully known.

# Escapement Estimates

Escapement estimates do not indicate the actual total escapement. At no time are all the salmon in the stream simultaneously, because the spawning run extends over a period of weeks.

Therefore, each escapement estimate is an index of the relative abundance at the time of survey.

The maximum estimate determined by survey methods at about the peak of the run is used as an estimate of the relative abundance of the total escapement. Reliable indices of relative abundance from year to year can be made only if the surveys are comparable. Evaluation of the following factors is necessary to determine the accuracy of the escapement estimates.

Observers, --The escapement records are from many different observers. Variability in estimating the number of salmon in a given area by different observers should be considered in judging the accuracy of the data. In general, variability increases with more observers.

Survey systems. --Different survey systems have been used by the various agencies. Reliability of the escapement estimates varies with the systems used.

Survey systems that use standard counting techniques over standard distances are the most reliable method now available for comparison of abundance between years, particularly when streams can be only partially covered. Standard survey distances in comparatively long streams were not widely used prior to 1949.

Survey systems requiring periodic visits to each stream during the spawning period are more reliable for estimates of peak abundance than systems requiring only one or two visits. The peak period of abundance in a salmon stream is usually relatively short, and one or two visits may miss the peak.

Type of survey. --Two basic methods for covering the streams during escapement surveys are being used.

The oldest method is the ground survey in which the observer follows the stream course on foot or in a skiff with an outboard motor. Most parts of the stream can be closely observed by this type of survey.

The newer method is aerial survey. This is a fast, economical means of covering a large number of streams in a short period of time over stream distances greater than is possible on the ground. This method requires experienced personnel familiar with ground surveys as well.

Aerial surveys are best suited for large rivers and streams where ground coverage is limited usually to the lower portion of the stream near the banks. Ground surveys are more reliable than aerial surveys on small streams that offer poor visibility from the air.

Observation conditions. --Weather is an extremely important factor in the reliability of escapement estimates. During flooding, ground surveys can be made only with great difficulty. Visibility is also greatly reduced because of turbid water. Any estimate made during years that had heavy rains of long duration during the peaks of spawning runs is not comparable with an estimate made during normal water levels.

Streams in which intertidal spawning predominates may present difficult observation conditions at high tide. Spawning salmon in the intertidal zone behave differently when the spawning areas are flooded by the high tide.

Aerial observations vary with the different types of aircraft used. Observations made from small light planes capable of following winding stream courses are more reliable than those made from larger planes which must fly at considerable height above the stream and generally at greater speeds.

# Physical Observations

Observations of the characteristics of each stream by different observers have been recorded with varying degrees of accuracy. Many details of stream descriptions are dependent upon the individual observer's ability and knowledge.

Many stream dimensions are merely estimates. Instruments for measurement were usually not available to observers, and pacing and estimating were used.

Most basic stream distances have been taken from aerial photographs and are relatively accurate. However, some errors may have occurred where reference points were difficult to identify. Drainage estimates were based on compensating polar planimeter measurements of valley areas, but occasionally drainage divides were difficult to distinguish and the areas given are only approximate.

#### EXPLANATION OF CATALOG FORMAT

Further descriptions of the data such as estimates of timing, temperature ranges, and spawning facilities are included under these specific headings in the explanation of the catalog format that follows:

# Stream Designations

Stream name. --This appears in the center of the first line of the heading. Recorded names or common local names are used when available. Otherwise unnamed streams of importance are given descriptive names corresponding to location or other distinguishing features. Some streams have identical names; they are retained without change because of

local usage. Many minor streams have no names; hence they are identified only by number.

Stream number . -- This number appears on the right side of the first line of the heading. The letter preceding the number designates the administrative district in Southeastern Alaskar e.g., "E" for Eastern. Continuity of stream numbers along a shoreline is followed where practical. Due to the numerous islands, breaks in the sequence have been necessary. A catalog number combining numbers and letters designates a minor stream, either adjacent to or between major streams numbered in sequence. For example, stream number 28A is a minor stream adjacent to major stream number 28.

ADF Statistical number. -- A space for the new ADF Statistical number is provided for use when the new numbers are assigned.

Latitude and longitude. --This appears on . the second line, left side, of the heading. Location of streams is given by the use of "N" for north latitude, and "W" for west longitude, stated in degrees (\*), and minutes and tenths of minutes (!). Location of the high tide point on the stream is given for positive identification.

Geographic location. --This appears on the third line of the heading. Each stream location is described by the administrative district, major channel, bay or inlet, arm or cove, and location within the smallest division given by direction (from true north) and distance (nautical miles).

Major species. --Included are those species of salmon which furnish the bulk of spawning in the stream. Where more than one dominates, both (or more) are included.

Other species, --This indicates other known species of salmon and trout using the stream.

Escapement timing. -- The timing is based on systematic stream survey records, which include a number of years of surveys with visits before, near, and after the peaks of abundance. Extensive stream temperature studies were conducted in conjunction with most of these surveys. The earliest runs of salmon occur along the colder mainland streams. The latest runs are in the outer channel and coastal areas where stream levels depend on rainfall. An intermediate timing of the runs occurs in the region lying between the mainland and outer coastal areas. Three major time divisions indicate the reak period that the major species are found in the stream. "Early" designates peaks before August 15; "middle," peaks between August 1S and September 15; "late," peaks after September 15. The range of time in which the major species are found in the streams is given by months.

Spawning facilities. --This includes a general classification rating of poor, fair, good, excellent. The rating is based on estimates by various individuals.

Stream temperatures, —In this classification the following general ranges are used for each stream. Each range is for the 3-month period (July, August, and September) when most salmon spawning migrations occur:

Cold-range, averaging less than  $50^{\circ}$  F., usually an early-run stream.

Normal-range, averaging between 50° and 55° F., usually a middle-run stream.

Warm-range, averaging over  $S5^{\circ}$  F., usually a late-run stream.

These ranges generally correspond to the geographic location of the stream and time of the runs. Where only limited temperature information is available for a stream, the range has been estlmated from its location and timing of run. Coldrange streams are usually found along the mainland or on the larger islands in the northern part of Southeastern Alaska. Warm-range streams are usually found along the outer channels and coastal areas, which are dependent upon precipitation as the primary source of supply. The normal-range streams appear to fall geographically between and may combine characteristics of both cold- and warm-range streams. Timing of the salmon run, especially pink salmon, also follows the geographic distribution outlined above. Recording thermograph data, available from a number of streams with known escapement timing, have been used as a basis for comparison.

Valley description. --Glacial, stream-cut, describe valley origin with a general description of the outstanding features such as length, width, timber, slopes, directions. They have been obtained from aerial photographs and by direct observations.

Drainage area. --This has been either estimated in square miles or computed with a polar planimeter from aerial photographs. Estimates of the drainage area of large systems have been taken from the small-scale, key, composite photographs and are less reliable. Data from Water Power of Southeastern Alaska 1947 are included when available. Descriptions are given of supply sources, drainage topography, and characteristics governing water quality and temperature ranges during spawning from the editor's interpretation of aerial photos and local knowledge.

Stream mouth identification. -- This is a description of some general features visible at the stream mouth.

Anchorage. --Descriptions are given of temporary anchorages that stream survey vessels have used for short stops. Overnight and storm anchorages are given in the <u>U.S. Coast Pilot</u>.

Trails and survey routes. --These include descriptions of trails that have been used by ground parties on stream surveys. Where other than the streambed was used, a description of routes is given, including difficult points, identification, outstanding features, and presence of brown bears. Reference to right or left bank is made while facing in the direction of the current.

Aerial survey notes. --The notes include remarks from various individual observations on the visibility in each stream and the conditions considered necessary for adequate observations. Approaches to valley, starting points, and any known hazards are described from aerial surveyor's notes and the editor's knowledge of the area.

# Intertidal Zone

Length. --The mileage is calculated from mean high to mean low tide and obtained from aerial photographs measured to the nearest tenth of a mile. Where low-tide locations were not known, the measurement was made from the edge of tidal flats visible in the photographs.

Average width. --These are estimates in feet, based on observations by various individuals.

Average depth. -- These are estimates in inches, or in feet in larger systems, based on observations by various individuals.

<u>Gradient</u>. --Estimates are in degrees from horizontal, based on observations by various individuals.

<u>Velocity.</u> --Estimates are in feet per second during normal water levels, based on observations by various individuals.

Bottom. --A description is given of the composition such as gravel (range from 1/4 inch to over 5 inches in diameter, arbitrary division point), mud, silt, organic materials, broken and water-washed rock, boulders, large rocks, bedrock, according to observations by various individuals.

Low-tide location. -- The mean low-tide point is an approximation and is given only where

it falls near good identification points, usually found in restricted stream outlets.

High-tide locations. -- Mean high tide generally has been found to correspond to the tree line. Other methods of locating the high tides, such as markers, are described when present.

Salmon schooling areas.—The areas are usually found near high tide where pools often occur. The areas are described with reference to the mean high tidemark. Annual variations in streambeds may alter locations of schooling areas.

Spawning areas. --Major areas are described with reference to the high tidemark. Its location may change with stream conditions.

General notes. --This includes notes pertinent to the intertidal stream that are of interest and importance in the description of runs.

# Upstream

Length accessible. --The length in miles was measured from aerial photographs along the course of the stream to the known upper limits of salmon migration. Where barriers restrict major species but allow more vigorous species to pass, secondary species limits are given under "Barriers."

Gradient. --Slope was estimated in degrees from horizontal, based on observation by various individuals.

<u>Velocity.</u> --Estimate in feet per second during normal water levels and from observations by various individuals.

Bottom. --A description is given whether gravel (range from 1/4 inch to over S inches in diameter, arbitrary division point), mud, silt, organic materials, broken and water-washed rock, boulders, and bedrock are present, from observations by various individuals.

Marker distance. --Distance is given in miles along stream course to standard termination point for salmon counting.

Marker identification. --Descriptions of an artificial marker or of identification feature marking termination point for salmon spawning surveys is given.

Barriers. --Distance and location above high-tide point to known barriers, both passable and impassable, are listed. Descriptions are also given when available.

Tributaries. --Tributaries used by spawning salmon are listed by distance from the mouth of the main stream, by direction, and by importance. Tributaries not used by salmon, but numerous, are mentioned under "Drainage."

Salmon schooling areas. --Based on survey records, major salmon schooling areas are listed where specific locations have been observed for an individual stream.

Spawning areas. --Major areas are described by distance above high tide or from a reference point in the stream.

General notes. --The notes include data pertinent to the upstream areas that are of interest and importance in the description of salmon escapements.

# Escapement Record

Stream name. -- This appears in the center of the first line of the heading.

Stream number. -- The new and old numbers appear on the right side of the first line of the heading on the first page of the escapement record.

<u>Date surveyed.</u> --Surveys are listed chron-ologically.

Miles surveyed. --Distances are given as measured along stream courses to the termination point of the regular survey. Ground surveys are designated by "G" and aerial surveys by "A." These symbols precede miles surveyed.

Surveyed by. --Initials of surveying organizations are listed as follows: Alaska Department of Fish and Game, ADF; Alaska Salmon Industry, ASI; Fisheries Research Institute, FRI; U.S. Fish and Wildlife Service, Bureau of Commercial Fisheries, FWS; and U.S. Forest Service, USFS.

Pinks, chums, other species.—Abundance of salmon observed during surveys is given as a numerical estimate. Estimates of secondary species are usually less reliable than those for the primary species. Estimates of dead salmon of all species usually are very general, having been based on the percentage of the count.

Remarks. --Adjective ratings are given first when available. The ratings range from poor to excellent and describe the abundance of salmon for the surveyed date only. They do not indicate seasonal escapement abundance. Other notes

entered in this column include survey conditions, behavior and distribution of salmon, and salmon observations beyond stated survey distances.

# Weir Record

Salmon escapement counts made by weirs operated by the U.S. Fish and Wildlife Service and the Alaska Department of Fish and Game follow Escapement Record when available.

# MAPPING SYMBOLS

X	North	<b>=</b>	Bridge
L	ANDFORMS	₫	Cabin Instrument Shelter
MITTITITITITITITITITITITITITITITITITITI	Bonk	<u>\</u>	Cable Crossing
ATTALLUMTTE	Bedrock	Munullin	Dam
	Boulders	000	Pier
And the second	Canyon	(र्जुङ)	Piling
	Dry Channel		Weir
	Glacier		Windfall
Mini	Gorge	V E	GETATION
Sallia ex	Gravel	66	Brush
2 min 11 11	Hill Low or Rolling Grade	alle, dile,	Grass
Marinit!	Steep Grade		Muskeg
	Ridge	歐	Stump
2000 St.	Sand (bar)	A	Trees Conifers
М	ARKERS	<u></u>	Deciduous
Military construction for the state of the s	Fish and Wildlife Limit Morker	,,,	ATER FORMS
	Forest Service Trail Marker	\tag{2}	Ancharage Channel (in sand
нт	High Tide Marker	**************************************	and gravel)
•	Marker	E. Car	Falls
3	Section Marker	f.	Fathom
	Stream Gage		Float
R	DUTES	Stal	Pool
	Railrood	- Tee	Rapids
	Road	£/	Riffle
	Trail (type designated)	P35000307	Stream Entrance
S 1	RUCTURES		Tidal Area (sand and gray value)
THE REAL PROPERTY.	Beaver Dam		Water (gray value)

# ALPHABETICAL INDEX OF SALMON STREAMS

```
ALECKS CREEK, Chatham Strait, Tebenkof Bay, 1.5 miles E. of E
                                                                            44C
    entrance to Elena Bay
Chatham Strait, Bay of Pillars, O.S mile from head, S. arm on
                                                                            43
Chatham Strait, Bay of Pillars, W. head of S. arm
                                                                            43E
Chatham Strait, Big Port Walter, Lover's Cove, Head
                                                                        Ε
                                                                            49 A
                                                                        E
Chatham Strait, Gut Bay, SW. end
                                                                            48
                                                                        Ε
Chatham Strait, Red Bluff Bay, outside of bay, S.
                                                                            47A
Chatham Strait, Rowan Bay, SE. shore opposite entrance to bay
                                                                       E
                                                                            42
Chatham Strait, Rowan Bay, head of N. arm
                                                                        E
                                                                            42A
Chatham Strait, Rowan Bay, stream E. of 42C
                                                                        E
                                                                            42B
                                                                        E
Chatham Strait, Rowan Bay, W. corner, W. arm
                                                                            42C
Chatham Strait, Tebenkof Bay, Elena Bay, E. head
Chatham Strait, Tebenkof Bay, Elena Bay, 1 mile from head on
                                                                        E
                                                                            44
                                                                        E
                                                                            44A
    W. side of bay
Chatham Strait, Tebenkof Bay, Elena Bay, Petrof Bay, E. of middle E
                                                                            44B
    of long island
Chatham Strait, Tebenkof Bay, Elena Bay, E. head of S. arm
                                                                       Ε
                                                                            44D
Chatham Strait, Tebenkof Bay, Petrof Bay, E. central shore
                                                                       E
                                                                            45
Chatham Strait, Tebenkof Bay, Petrof Bay, W. central shore
Chatham Strait, Tebenkof Bay, Petrof Bay, head of large bight
                                                                       E
                                                                            4SA
                                                                       Ε
                                                                            4SB
    on SE. corner
Chatham Strait, Tebenkof Bay, Head, W. arm
Chatham Strait, Tebenkof Bay, Thetis Bay, central E. shore
Chatham Strait, Tebenkof Bay, Thetis Bay, Head
                                                                            4SC
                                                                       E
                                                                            46
                                                                       E
                                                                            46A
Chatham Strait, Tebenkof Bay, Thetis Bay, W. shore
                                                                       E
                                                                            46B
DEEP CREEK, Chatham Strait, Red Bluff Bay, SW. head of bay
                                                                       E
                                                                            47
Frederick Sound, Chapin Bay, Head
                                                                       Ε
                                                                            28A
Frederick Sound, Chatham Strait, Keku Strait, between Kake and
                                                                       E
                                                                            32
    Keku Cannery
Frederick Sound, Herring Bay, N. head of bay
                                                                       E
                                                                            28B
Frederick Sound, Herring Bay, S. arm head
                                                                       E
                                                                            28C
                                                                       E
Frederick Sound, Herring Bay, immediately E. of 28B
                                                                            28D
Frederick Sound, Keku Strait, first stream S. of E 32
                                                                       E
                                                                            32A
Frederick Sound, Keku Strait, Hamilton Bay, NE. head of bay
                                                                       E
                                                                            33A
Frederick Sound, Murder Cove, W. stream at head
                                                                       Ε
                                                                            29
Frederick Sound, Murder Cove, E. stream at head
                                                                       E
                                                                            30
Frederick Sound, Port Camden, SW. arm, head
                                                                       E
                                                                            35A
Frederick Sound, Port Camden, E. shore
                                                                       E
                                                                            35B
Frederick Sound, Saginaw Bay, 4 miles from head on N. shore
                                                                       E
                                                                            37
Frederick Sound, Saginaw Bay, 3 miles from head on N. shore
                                                                       E
                                                                            37B
Frederick Sound, Saginaw Bay, middle stream at W. corner of head
                                                                       Ε
                                                                            38A
Frederick Sound, Security Bay, 2 miles from extreme head, E. shore E
                                                                            40
                                                                        E
Frederick Sound, Security Bay, extreme head of lagoon
                                                                            40A
Frederick Sound, Security Bay, 1.5 miles W. of lagoon, S. shore
                                                                        E
                                                                            41
Frederick Sound, Security Bay, middle of W. shore
                                                                        E
                                                                            41A
Frederick Sound, Security Bay, 1 mile from mouth of bay on S. shore E
                                                                            41B
Frederick Sound, South Passage, Eliza Harbor, Head
                                                                       E
                                                                            26
Frederick Sound, South Passage, Eliza Harbor, W. head
                                                                       E
                                                                            27
Frederick Sound, South Passage, Eliza Harbor, 4 mile S. of head,
                                                                       E
                                                                            28
    W. shore
Frederick Sound, Woewodski Harbor, 1 mile inside entrance, E.
                                                                      E
                                                                            25 A
    shore
```

HAMILTON CREEK, Frederick Sound, Keku Strait, Hamilton Bay, SE, head of bay	E	33
KADAK CREEK, Frederick Sound, Keku Strait, Kadak Bay, Head	E	36
KWATAHEIN CREEK, Chatham Strait, Bay of Pillars, 0.2 mile E.	E	43F
of F. L. P. Reduction Plant		
PILEDRIVER CREEK, Chatham Strait, Tebenkof Bay, Piledriver	E	43B
Cove, Head, 5 miles E. of Point Ellis		
PORT CAMDEN CREEK, Frederick Sound, Keku Strait, Port	E	35
Camden, SE. head		
SAGINAW CREEK, Frederick Sound, Saginaw Bay, SW. head	E	39
SASHIN CREEK, Chatham Strait, Little Port Walter, Head	E	49
STRAIGHT CREEK, Frederick Sound, Saginaw Bay, E. corner of	E	38
head		

# NUMERICAL INDEX OF SALMON STREAMS

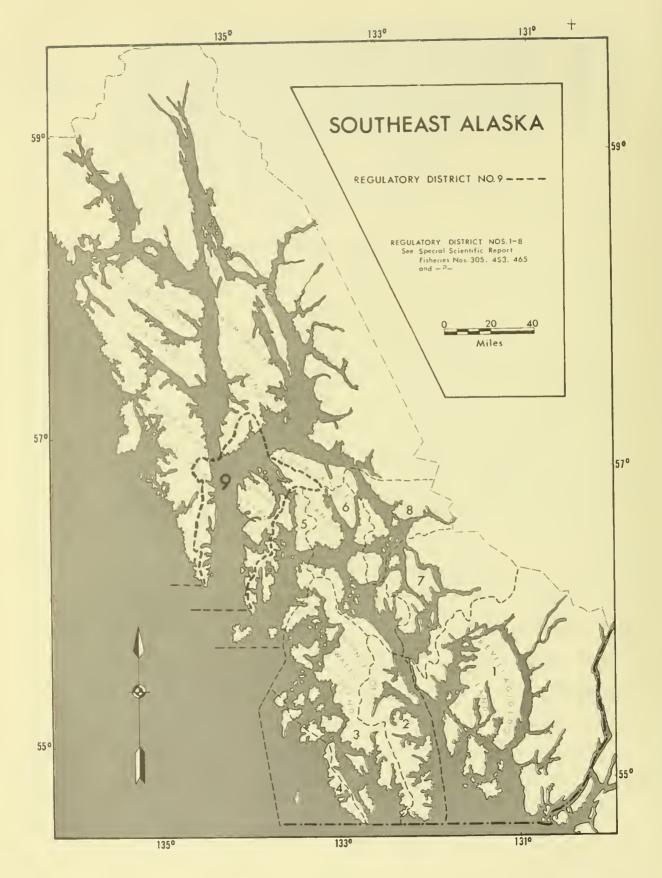
Frederick Sound, Woewodski Harbor, 1 mile inside entrance, E. shore E 25 A Frederick Sound, South Passage, Eliza Harbor, Head E 26 Frederick Sound, South Passage, Eliza Harbor, W. head E 27 Frederick Sound, South Passage, Eliza Harbor, 4 miles S. of head, E 28 W. shore Frederick Sound, Chapin Bay, Head E 28A Frederick Sound, Herring Bay, N. head of bay E 28B E Frederick Sound, Herring Bay, S. arm head 28C Frederick Sound, Herring Bay, immediately E. of 28B E 28D E 29 Frederick Sound, Murder Cove, W. stream at head Frederick Sound, Murder Cove, E. stream at head E 30 Frederick Sound, Chatham Strait, Keku Strait, between Kake and Ε 32 Keku Cannery E 32A Frederick Sound, Keku Strait, first stream S. of E 32 Ε 33 HAMILTON CREEK, Frederick Sound, Keku Strait, Hamilton Bay, SE. head of bay Ε Frederick Sound, Keku Strait, Hamilton Bay, NE. head of bay 33A Ε PORT CAMDEN CREEK, Frederick Sound, Keku Strait, Port Camden, 35 SE. head E Frederick Sound, Port Camden, SW. arm, Head 35A E 35B Frederick Sound, Port Camden, E. shore KADAK CREEK, Frederick Sound, Keku Strait, Kadak Bay, Head E 36 E Frederick Sound, Saginaw Bay, 4 miles from head on N. shore 37 E 37B Frederick Sound, Saginaw Bay, 3 miles from head on N. shore E STRAIGHT CREEK, Frederick Sound, Saginaw Bay, E. corner of head 38 E Frederick Sound, Saginaw Bay, middle stream at W. corner of head 38A E 39 SAGINAW CREEK, Frederick Sound, Saginaw Bay, SW. head E 40 Frederick Sound, Security Bay, 2 miles from extreme head, E. shore Frederick Sound, Security Bay, extreme head of lagoon E 40A E Frederick Sound, Security Bay, 1.5 miles W. of lagoon, S. shore 41 E Frederick Sound, Security Bay, middle of W. shore 41A E Frederick Sound, Security Bay, 1 mile from mouth of bay on S. shore 41B E Chatham Strait, Rowan Bay, SE. shore opposite entrance to bay 42 E 42A Chatham Strait, Rowan Bay, head of N. arm E 42B Chatham Strait, Rowan Bay, stream E. of 42C Chatham Strait, Rowan Bay, W. corner, W. arm E 42C E Chatham Strait, Bay of Pillars, O 5 mile from head, S. arm on E. side 43 E 43B PILEDRIVER CREEK, Chatham Strait, Tebenkof Bay, Piledriver Cove, Head, 5 miles E. of Point Ellis E 43E Frederick Sound, Bay of Pillars, W. head of S. arm E 43F KWATAHEIN CREEK, Chatham Strait, Bay of Pillars, 0.2 mile E. of F. L. P. Reduction Plant Chatham Strait, Tebenkof Bay, Elena Bay, E. head Chatham Strait, Tebenkof Bay, Elena Bay, 1 mile from head on E 44 E 44A W. side of bay E 44B Chatham Strait, Tebenkof Bay, Elena Bay, Petrof Bay, E. of middle of long island E 44C ALECKS CREEK, Chatham Strait, Tebenkof Bay, 1.5 miles E. of entrance to Elena Bay E 44D Chatham Strait, Tebenkof Bay, Elena Bay, E. head of S. arm Chatham Strait, Tebenkof Bay, Petrof Bay, E. central shore E 45 E 45A Chatham Strait, Tebenkof Bay, Petrof Bay, W. central shore E 45B Chatham Strait, Tebenkof Bay, Petrof Bay, head of large bight on SE. corner

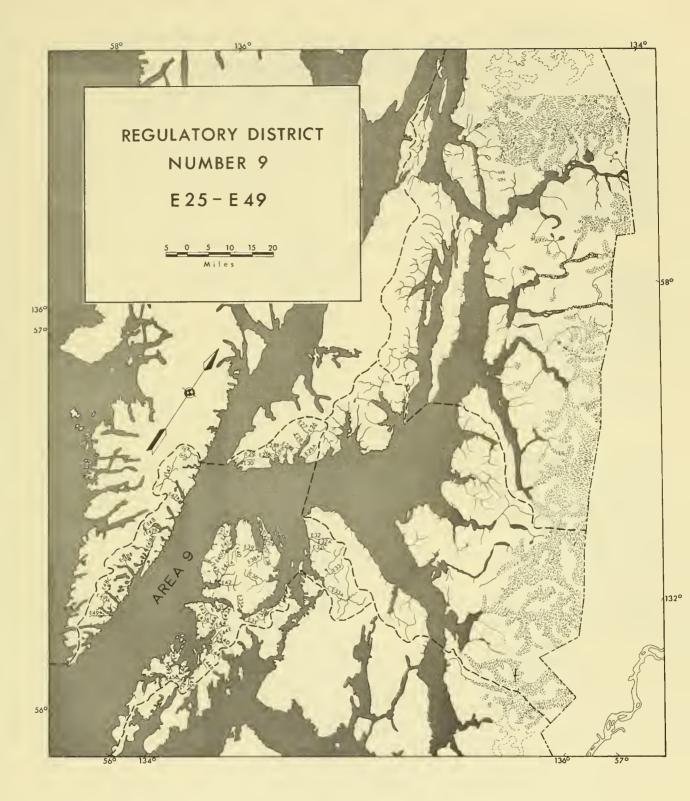
Chatham Strait, Tebenkof Bay, Head, W. arm

E

45C

E	46	Chatham Strait Tehenkel Boy Thetia Pour senter F
ند	40	Chatham Strait, Tebenkof Bay, Thetis Bay, central E. shore
E	46A	Chatham Strait, Tebenkof Bay, Thetis Bay, Head
E	46B	Chatham Strait, Tebenkof Bay, Thetis Bay, W. shore
E	47	DEEP CREEK, Chatham Strait, Red Bluff Bay, SW. head of bay
E	47A	Chatham Strait, Red Bluff Bay, outside of bay, S.
E	48	Chatham Strait, Gut Bay, SW. end
E	49	SASHIN CREEK, Chatham Strait, Little Port Walter, Head
E	49A	Chatham Strait, Big Port Walter, Lover's Cove. Head





ADF STAT. No.

E 2SA

EASTERN, FREDERICK SOUND, WOEWODSKI HARBOR, 1 mile inside entrance, E. shore.

MAJOR SPECIES Pink. OTHER SPECIES Chum, coho.
ESCAPEMENT TIMING Middle.
SPAWNING FACILITIES Limited.
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE S.3 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE Near stream mouth just off flats.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Too brushy for survey.

# INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

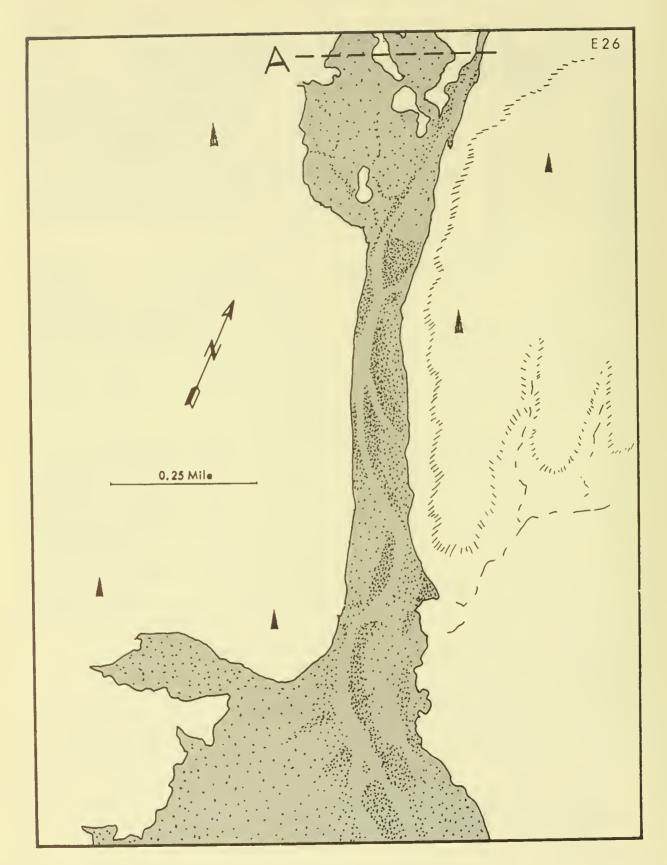
AVERAGE WIDTH/DEPTH

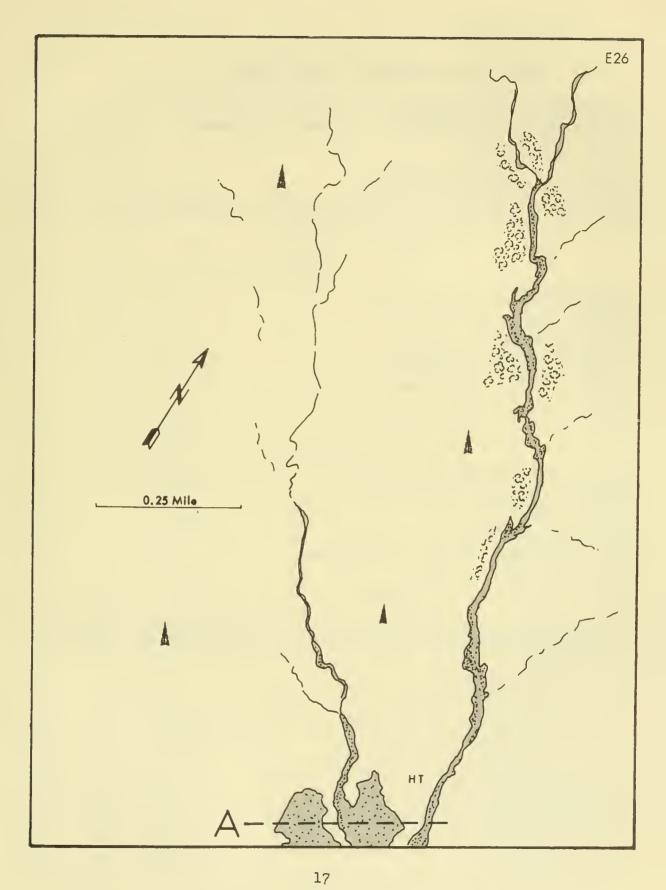
AVERAGE WIDTH/DEPTH

# ESCAPEMENT RECORD

E 25A

Date	SUR VEYED Miles	Ву	PINK Live Dead	CHUM Live Dead	OTHER SPECIES Live	REMARKS
1952						
Aug 25	A 1.5	FWS		4		Poor seeding
1954						
Sept 13 1955	G 0.5	FWS	2,000	S00		
July 23 1956	A 2.0	FWS				No salmon observed
Sept 15	0.2	FWS	1,000			





57° 15, 4' N. 134° 17, 5' W.

EASTERN. FREDERICK SOUND, SOUTH PASSAGE, ELIZA HARBOR, Head

MAJOR SPECIES Pink.

OTHER SPECIES Chum, coho.

AVERAGE WIDTH/DEPTH

ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES Very good gravel in intertidal zone and in stream.

STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 9.7 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE Good anchorage off flats or in bight at entrance to Eliza Harbor behind Liesnoi I.

TRAILS AND SURVEY ROUTES Stream very open and easy to walk and wade; logging road for length.

AERIAL SURVEY NOTES Easy to survey. Water clear.

# INTERTIDAL ZONE

LENGTH 0.5 mile.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Gravel.
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS Several good pools.

SPAWNING AREAS Throughout zone.

GENERAL NOTES Very good spawning areas.

# UPSTREAM

LENGTH ACCESSIBLE Approximately 2 miles. AVERAGE WIDTH/DEPTH 50'/7". GRADIENT AND VELOCITIES Moderate.

BOTTOM Good gravel.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES Right tributary dry on low water years.

SCHOOLING AREAS Ample.

SPAWNING AREAS Very good to above forks.

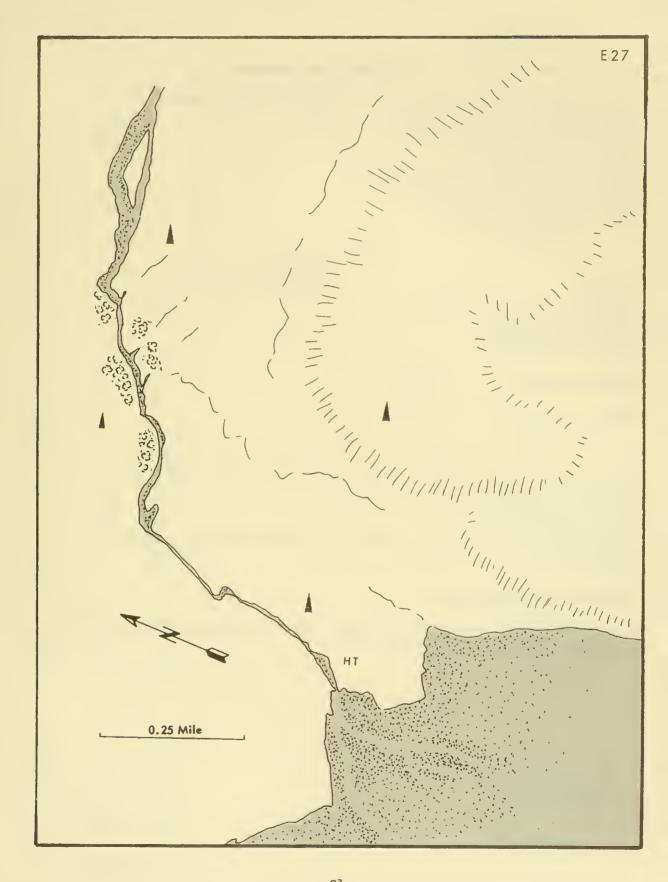
GENERAL NOTES Logging road being constructed up W. side of stream in 1963. It appears that this stream has a middle-run in late August, but receives its heaviest seeding in mid-September in some years.

ESCAPEMENT RECORD

Date	SURVEYED Miles	Ву	PIN Live	K Dead	CHU Live	M Dead	ОТ	HER SPECIES	REMARKS
Date	ivii tes	Бу	Live	Deud	LIVE	Dead		Tive	
1940									
Sept 13 1945			54,000						
Sept 23 1947	1. 0		80,000		500				
Oct. 4	1.0		4,000		200			50 cohos	
1950									
Aug 31	A				4.00				
Sept 14	0.6		204		125				Nr. 61-1 -1 1
Nov 7 1953	0. 2								No fish observed
5ept 12	A 1.0	FWS	450		1,500			50 cohos	
1955					,				
July 21	G 0. 2	ADF	100					100 cohos	500 pinks at mouth
July 26	G 0. 2	ADF	100					100 cohos	500 pinks at mouth
Sept 10 1956		ADF	8,600		400				5,000 pinks at mouth
Sept 1	0. 7		25,000						
Sept 2	1.0		25,000						
Sept 14 1957	1.0	FW5	17,000						
Aug 3	G0. 2		>1,300						
Aug 13	G0. 2	FWS	2,000						
Aug 17	G	FW5	650		11				
Aug 29	G G	FWS FWS	800		11 1 <b>50</b>				
Aug 30 Sept 6	G1.0	FW5	2, 850 4, 018		370				392 dead fish
Sept 13	A	FWS	1,010		370				Jumpers in bay
1958									,
Aug 11	G 1.5	FW5	1,000		200				
Sept 1	G 0.5	FWS	3,900		100				
Sept 11 1959	G 1.0	FW5	3,850		950				
July 21	A 0.7	FW5	500		50				800 pinks at mouth
Aug 11 1960	A 1.0	FWS	10,000						
July 21	A	ADF							No fish observed
July 29	A	ADF							No fish observed
Sept 6 1961	A length	ADF	1,000		1,500				
July 23	A 2.0	ADF	2,000						1,500 in intertidal
5ept 8 1962	A 2.0	ADF	23,000						Mixed
July 16	A 0.2	ADF							No fish observed
July 24	G 0.5	ADF	350						4,000 mixed at mouth
July 28	A mouth		000		50				No fish observed 600 in intertidal zone
Aug 1	G 1. 0	ADF	800		50				6,000 in intertidal zone
Aug 13 Aug 20	G 0.7 G 0.2	ADF ADF							Very few chums
Aug 29	A A	ADF							1, 100 mixed; 3, 000 in
		1			_				intertidal zone
					19				

# ESCAPEMENT RECORD

Date	SUR VEYED Miles	Ву	PIN Live	K Dead	CHI Live	JM Dead	OTHER SPECIES Live	REMARKS
1963 July 24 Aug 1 Aug 13 Aug 29		ADF ADF ADF ADF	350 800 1,000		0 50			3,000-5,000 mixed at mouth 600 in intertidal zone 5,000-7,000 in intertidal 1,100 mixed in stream; 3,000 in intertidal zone



EASTERN, FREDERICK SOUND, SOUTH PASSAGE, ELIZA HARBOR, W. head.

MAJOR SPECIES Pink.
ESCAPEMENT TIMING Pink late.
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE 6.9 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE E. of Liesnoi I.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

OTHER SPECIES Chum.

AVERAGE WIDTH/DEPTH

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 1 mile. AVERAGE WIDTH/DEPTH 30'/6".
GRADIENT AND VELOCITIES Moderate current.
BOTTOM Good gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS About 1. 25 miles from the mouth there is a waterfall that salmon cannot ascend.
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS Excellent.

GENERAL NOTES Drainage area has been logged. Fringe of trees has been left along part of the stream. Log jam reported 200 yards below falls.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aerial surveys by A]

Date	SUR VEYED Miles	Ву	PINI Live	K Dead	CHU Live	TM Dead	OTHER SPECIES Miles	REMARKS
1940								
Sept 14			26,700					
1943 Oct 14	0. 2		2,900		100			
1945	0. 2				100			
Sept 23 1947	0. 7		50,000					A few chums
Oct 4 1953	1. 2		6,000		600			
Sept 12 Nov 14	G 1.0 G 0.2	FWS FWS	450		1,500		50 cohos	No live fish. Few dead
1954								
Sept 3 1955	G 1.5		16,500		3,500			500 pinks at mouth
July 21	G 0. 2	FWS	100				100 cohos	
July 23 July 26	A 2.0 G 0.2	FWS FWS	100				1 <b>0</b> 0 cohos	No salmon observed
1956								
Sept 14 1957	1. 0	FWS	2,000					4,000 pinks at mouth
Aug 4 Aug 9	G G	FWS FWS	37 150					
Aug 11	A length	FWS	1,000					
Aug 13	G 0.5	FWS	41					
Aug 14	G 0.5	FWS	41					
Aug 17	G 0. 2	FWS	92					
Aug 21	G 0.5	FWS	80					
Aug 27	G	FWS	350		200			
Sept S 1958	G 0.5	FWS	155		20			
Aug 12	G 1.0	FWS	3					450 pinks, 8 chums in high tide zone
Sept 1 1959	G 0. 2	FWS	130		10			
July 21 Oct 4	A falls G	FWS FWS	25		5			No fish observed 7S chums at mouth
1960	G	F W S	۵		3			75 Chains at mouth
	No record	l						
1961 1962	No record	l						
July 28 1963	A mouth	ADF						No salmon observed
July 16	A mouth	ADF						No salmon observed
July 24	G 0. 2	ADF						No salmon observed; 4,000 mixed at mouth
Aug 1	G 0. S	ADF			4			
Aug 13	G 0.7	ADF	1,100					Fish spawning

ADF STAT. No. E 28

57° 11.8' N. 134° 18.2' W.

EASTERN, FREDERICK SOUND, SOUTH PASSAGE, ELIZA HARBOR, 4 miles S. of head, W. shore.

MAJOR SPECIES Pink. OTHER SPECIES
ESCAPEMENT TIMING
SPAWNING FACILITIES Fair.
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE 7.8 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE E. of Liesnoi I.
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

# INTERTIDAL ZONE

AVERAGE WIDTH/DEPTH

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 28'/18".
GRADIENT AND VELOCITIES Turbulent current.
BOTTOM Rock with mixture of gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

ESCAPEMENT RECORD

	SURVEYED	)	PIN	ΙΚ	CHU	M	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1940 Sept 22		FWS	400					
1947 Oct 4		FWS	500		40		20 cohos	
1950	0.2	FWS	300		10		20 001103	P
Aug 31 Sept 14	0. 2 0. 5	FWS	10		34			Few at mouth
Nov 7 1953	0.5	FWS						No fish observed
Sept 12 1954	G 0. 2	FWS			1			
Sept 13 1955	G 0.5	FWS	700		600			
July 21	0. 2	FWS	100					
July 23	A 2.0	FWS						No salmon observed
July 26	0. 2	FWS	100					
Sept 11 1956	0. 2	FWS	40					
July 24	0.7	FWS						No salmon observed
Aug 4	0. 2	FWS						No salmon observed
Aug 12	A	FWS	Maa					No salmon observed
Aug 31	0. 2	FWS	700		2			
Sept 1		FWS	700		2			
Sept 13 1957		FWS	2,000					
Aug 11	A lengtl		100					
Aug 11	G 0.3	FWS	60					
Sept 7 1958	G 0. 2	FWS	2		49			
July 23	G 1.0	FWS						No salmon observed
Sept 1 1959	G 0. 3	FWS	110					SO pinks in tidal zone
July 21 1960	A 0.5	FWS	150					
Sept 6 1961	A 1.0	AD <b>F</b>						No salmon observed
July 23 1962	A mouth	1 ADF						No salmon observed
July 28 1963	A mouth	1 ADF						No salmon observed
July 16	A IT	ADF						No salmon observed
July 24	G 0.5	ADF						No salmon observed
Aug 1	G 0. S	ADF	1					No salmon at mouth or in intertidal zone
Aug 13	G 0. S	ADF						No salmon observed
Aug 29	A IT	ADF						No fish- stream dry

ADF STAT. No.

E 28A

EASTERN, FREDERICK SOUND, CHAPIN BAY, Head.

MAJOR SPECIES Pink. OTHER SPECIES Chum.
ESCAPEMENT TIMING Middle-August.
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE 1.9 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

# INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH

Date	SURVEYED Miles	Ву		NK Dead		UM Dead	OTHER SPECIES Live	REMARKS
1948								
-								No fish observed
1956								
Sept 13	0.1	FRI	200					1,000 at mouth
1957								
July 28	G mouth	FWS						No fish observed
Aug 28	G mouth	FWS						No fish observed
Sept 7	G 0.1	FWS						No fish observed
1958								
July 21	A	FWS						No fish observed
Sept 1 1963	mouth	FWS						No fish observed
July 24	G	ADF						No fish observed; rapids
	350 yds							about 400 yards from mouth; stream goes under- ground at intertidal zone

E 28B

EASTERN, FREDERICK SOUND, HERRING BAY, N. head of bay.

MAJOR SPECIES Pink.
ESCAPEMENT TIMING Middle-late.
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE 3 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES

# INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

AERIAL SURVEY NOTES

SPAWNING AREAS

GENERAL NOTES

# UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

# ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aerial surveys by A]

	SURVEYED		PIN	٧K	CHUM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live Dead	Live	
1956							
Sept 16 1957	0.2	FWS	500				
Sept 7 1963	G 0.5	FWS	2		118		
July 24	G 0.2	ADF					No fish observed; 2 schools at mouth
July 29	A mouth	ADF					11,000 salmon at mouth

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH

OTHER SPECIES

EASTERN, FREDERICK SOUND, HERRING BAY, S. arm, Head.

OTHER SPECIES MAIOR SPECIES ESCAPEMENT TIMING SPAWNING FACILITIES STREAM TEMPERATURES VALLEY DESCRIPTION DRAINAGE 9.4 square miles (polar planimeter). STREAM MOUTH IDENTIFICATION ANCHORAGE TRAILS AND SURVEY ROUTES AERIAL SURVEY NOTES

# INTERTIDAL ZONE

LENGTH GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

# UPSTREAM

LENGTH ACCESSIBLE GRADIENT AND VELOCITIES BOTTOM MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

# ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aerial surveys by A]

Date	SURVEYED Miles	Ву		NK Dead	CHT Live	JM Dead	OTHER SPECIES Live	REMARKS
1986 Sept 16	G 0.2	FWS						5,000 pinks at mouth; good seeding
196 <b>3</b>								
July 24	G 0,2	ADF	350					Few jumps at mouth
July 29	A mouth	ADF	11,000					

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH

EASTERN, FREDERICK SOUND, HERRING BAY, immediately E. of 28B.

MAJOR SPECIES Pink. ESCAPEMENT TIMING SPAWNING FACILITIES STREAM TEMPERATURES VALLEY DESCRIPTION DRAINAGE 3 square miles (polar planimeter). STREAM MOUTH IDENTIFICATION ANCHORAGE TRAILS AND SURVEY ROUTES AERIAL SURVEY NOTES

## INTERTIDAL ZONE

OTHER SPECIES

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH

LENGTH GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

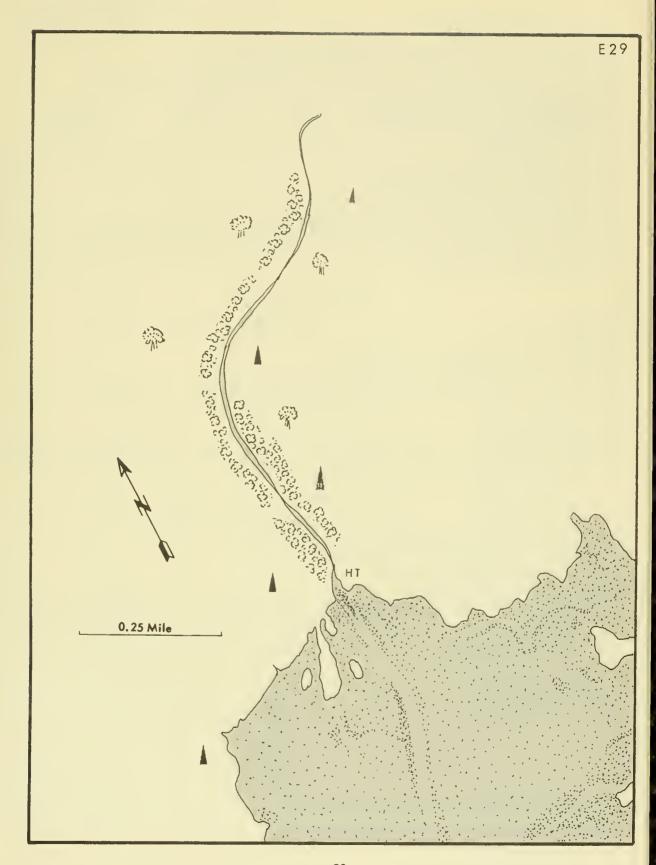
LENGTH ACCESSIBLE GRADIENT AND VELOCITIES BOTTOM MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

# ESCAPEMENT RECORD

	SUR VEYED	)	PINK	CHUM	OTHER SPECIES	REMARKS
Date	Miles	By	Live Dead	Live Dead	Live	
1956						
Sept 16	0.2	FWS	100			5,000 pinks at mouth
1957						
July 24	G 0.2	ADF				No fish observed
July 29	A mouth	ADF	11,000			
Aug 11	A length	FWS				No fish observed
Sept 7	G 0.3	FWS				No fish observed



EASTERN, FREDERICK SOUND, MURDER COVE, W. stream at head.

MAJOR SPECIES Pink, chum.

OTHER SPECIES Coho.

ESCAPEMENT TIMING Middle, Aug.

SPAWNING FACILITIES Good.

STREAM TEMPERATURES Cold-middle range Observed temperatures: 53.5° F., 8/20/48; 44° F., 9/10/48.

VALLEY DESCRIPTION Wide, flat valley, heavily timbered with a few muskegs scattered throughout.

Stream rises toward the north sharply.

DRAINAGE 8.1 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Enters through a long tideflat area at extreme head of bay. This stream and E 30 have the same intertidal area.

ANCHORAGE Vessels can lay at old cannery site located on E. shore at head of bay.

TRAILS AND SURVEY ROUTES Stream has a slippery bottom in spots but is otherwise easily hiked.

AERIAL SURVEY NOTES Very difficult to survey from air above the intertidal area due to brush over story and muskeg water.

### INTERTIDAL ZONE

LENGTH 0.5 mile.

AVERAGE WIDTH/DEPTH 16'/7".

GRADIENT AND VELOCITIES Slight.

BOTTOM Small gravel, some clay, and bedrock.

LOW TIDE LOCATION

HIGH TIDE LOCATION End of grass flats at beginning of timber.

SCHOOLING AREAS Schooling is done primarily off the stream mouth as the intertidal area is fairly shallow.

SPAWNING AREAS

GENERAL NOTES A long, flat, intertidal zone. Stream joins another small stream which flows from the right side of the head of the cove about three-quarters of the way up the intertidal zone.

## UPSTREAM

LENGTH ACCESSIBLE 0.5 surveyed. AVERAGE WIDTH/DEPTH 16'/7".

GRADIENT AND VELOCITIES Slow to moderate.

BOTTOM Medium-sized gravel, some bedrock, and clay.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS None reported.

TRIBUTARIES Two small streams enter this stream from a hill on the left going up, both impassable to fish.

SCHOOLING AREAS

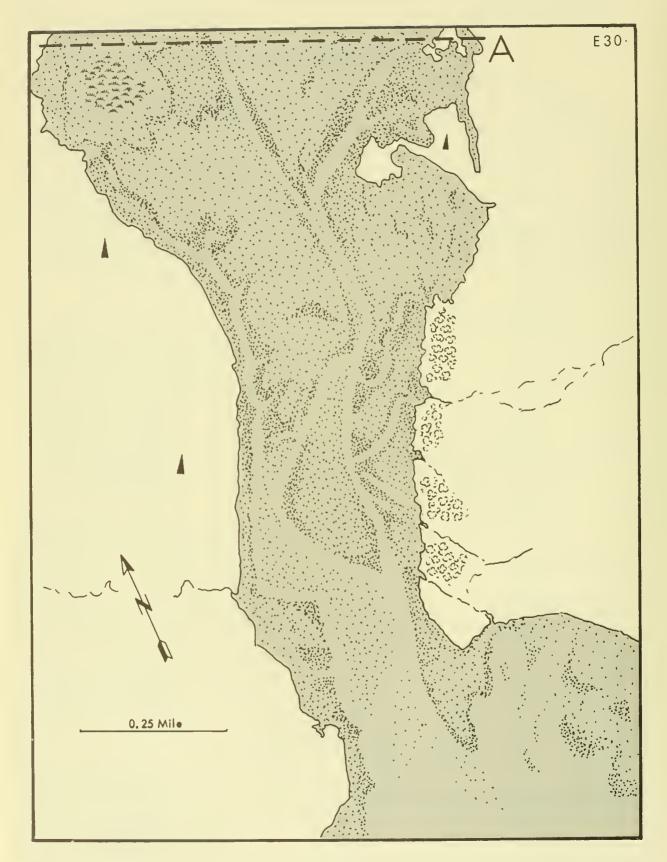
SPAWNING AREAS Good.

GENERAL NOTES

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aeriai surveys by A]

D .	SURVEYED	D	PIN		СН		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1941	1 5	EMC	20,000		500			
Aug 20 1947	1.5	r vv S	28,000		S00			
Oct 4 1948	G	FWS	35		6			
Aug 20	G 0.5	FRI	70		110	31		
5ept 10 1950	G 0. S	FRI	72		248	9		
July 27 1983	G 0.7	FRI			1			
Aug 20	A 1.5	FW5	50		250			
Sept 17 1954	G 0.7	FWS	20		37			
Aug 23 1955	G 0.7	FWS			2			
1056	No reco	rd						
19S6 Aug 8	G	FWS			4			
Aug 13	G	FWS	45		65			300 pinks, 700 chums at
Aug 17		FWS			250			mouth 1,000 chums at mouth
Aug 21		FWS						3,000-5,000 head of bay
Aug 29		FWS	1, 200		500			>1,000 pinks, >1,000 chums at mouth
Sept 7	0.5	FWS	200		200			
Sept 13		FWS	<b>4</b> S		6S			300 pinks, 700 chums at mouth
1957	60.5	TTALC	101		01			
Sept 8	G 0.5 G 0.7	FWS FWS	101 20		21		1 00%	
Sept 23 1958			20		20		1 coho	
Aug 1		FWS			40			
Aug 8		FWS	00		300			
Aug 12		FWS	20		280			
Aug 12 1959	G 3.0	FWS			400			
July 25		FW5			36			
July 28		FWS			100			3,000 pinks in mouth
Aug 10		FWS	275		25			200 : 1 : 1:
Aug 11		FW5	1,200		300			300 pinks in salt water
Aug 14 Season	G 3.0	FWS	300					
estimate 1963	e G	FWS	1, 200		200			
July 16	A IT	ADF						Few jumps at mouth
July 23		ADF						6,000 mixed off mouth
July 29		ADF						7,000 at mouth
Aug 9	G 0.7	ADF	10					2,000 salmon at mouth; 100 in intertidal zone; fish spawning





57°03.3' N. 134°32.3' W.

EASTERN, FREDERICK SOUND, MURDER COVE, E. stream at head of cove.

MAJOR SPECIES Pink. OTHER SPECIES Chum.

ESCAPEMENT TIMING Middle. SPAWNING FACILITIES Good.

STREAM TEMPERATURES Normal range. Observed temperatures: 54° F., 8/20/48; 48° F., 9/10/48.

VALLEY DESCRIPTION

DRAINAGE 6.5 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES Slight.
BOTTOM Small gravel; some bedrock.
LOW TIDE LOCATION
HIGH TIDE LOCATION

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES A long, flat intertidal zone.

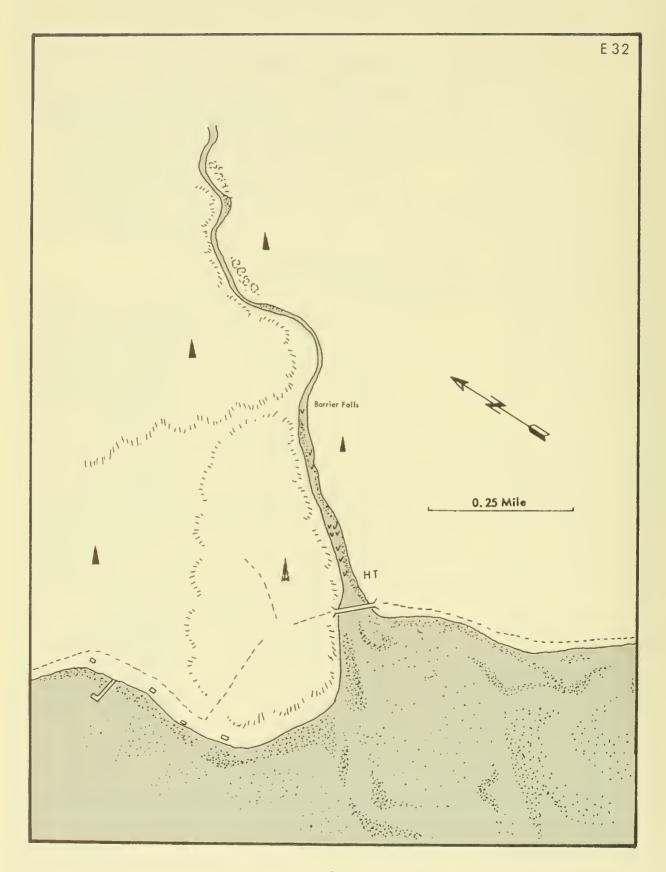
#### UPSTREAM

LENGTH ACCESSIBLE 2 miles. AVERAGE WIDTH/DEPTH 121/6".
GRADIENT AND VELOCITIES Slow to moderate.
BOTTOM Medium gravel, some bedrock, and clay.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

	SURVEYED		PI	NK	CHU	M	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1943	<b>.</b>	TTATO	10 000		F 000			
Sept 10	1.0	FW5	10,000		5,000			
1945 Sept 22	1. 0	EMS	17,5 <b>0</b> 0		1, 200			
1947	1.0	1 113	17,300		1, 200			
Oct 4	G 1.5	FWS	25					
1948								
Aug 20	G 0. S	FRI	3					
Sept 10	G 0. S	FRI	74	1	16	9		
1952								<u></u>
Aug 25	A 1.0	FWS						Fair seeding
1984	C 4 0	FWS						50 fish in stream
Aug 4 1956	G 4.0	r W S						30 Han in stredin
Aug 13	G	FWS	45		68			300 pinks, 700 chums at
and 10								mouth
Aug 17	G	FWS			250			1,000 chums at mouth
Aug 29	G	FWS	1,200		500			>1,000 chums, >1,000
								pinks at mouth
Sept 7	G 1.0	FWS	1,600		3S0			
Sept 13	G 0.2	FWS	500					3,000 pinks at mouth
19S7 July 28	A have	FWS						200 jumpers in bay
Aug 11	A bay A length							1,000 pinks off mouth
Aug 12	G mouth							500 chums at mouth
Sept 7	G 0. 5	FWS	8		36			
1958			_					
Aug 1	G 0. 2	FWS			40			
Aug 13	G 2.0	FWS			450			
1959								
Aug 17	A 1.0	FWS	150		50			
1961	A 170	ADF						27 (1)
July 16 July 23	A IT A 1.5	ADF						No fish observed
July 23	G 0. 2	ADF						800 fish at mouth
July DJ	0 0. 2	1111						No fish in stream; 6,000 mixed at mouth
Aug 9	G 0.7	ADF	<b>7</b> 00					2,000 fish at mouth
Aug 29	A IT	ADF						1, S00 new fish in inter-
								tidal zone
Sept- 8	A 0. 2	AD <b>F</b>	8,000					



56°55.9' N. 133°52.2' W.

EASTERN, FREDERICK SOUND, CHATHAM STRAIT, KEKU STRAIT, between Kake and Keku Cannery,

MAJOR SPECIES Pink. OTHER SPECIES ESCAPEMENT TIMING
SPAWNING FACILITIES Salmon spawn in the extensive tideflat.
STREAM TEMPERATURES No observed temperatures.
VALLEY DESCRIPTION
DRAINAGE 12 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

# INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES Moderate.
BOTTOM Rock and gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

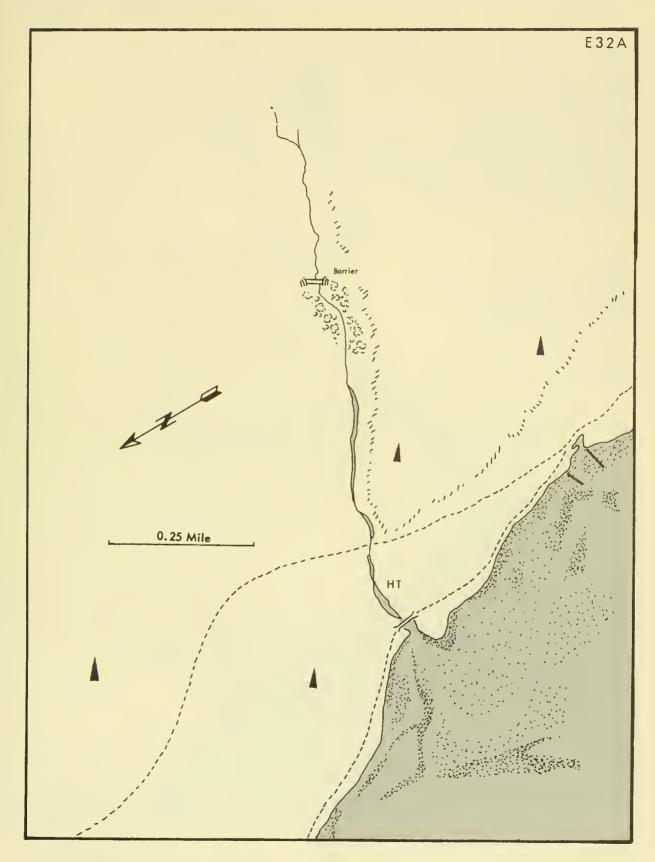
SPAWNING AREAS Good.

GENERAL NOTES This stream is the source of water for the Keku Cannery and descends to the Strait from a series of inaccessible falls, under a bridge and through and extensive tideflat.

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH 201/101.

	SURVEYE	)	PINK	СНО	M	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live D		Dead	Live	NEWANAS
1940							
<b>S</b> ept 16 1941	0.5	FRI	2,500				
<b>S</b> ept 25 1949	0.5	FRI	15,000				
Aug 4 1953		FRI	1,000				
Sept 9 1955	G 0. 2	FWS	7	4			
July 23	A 2.0	FWS	200				
Sept 3	G 1. S	FWS	800				
Sept 14 1956	G 1.5	FWS	1,500				
Sept 12 1957	2.0	FWS	7, 200	800			
Aug 6 19 <b>5</b> 8	A falls	FWS					25 fish seen
Aug 8	G 0.2	FWS		200			
Aug 13	G 0.5	FW5	200	250			
Aug 15	G 0.2	FWS	400	800			
Aug 27	G 0.2	FWS	100	150			
Aug 29 1959	A 0. 2	FWS	50	100			
July 23	A 0.2	FWS					No fish observed



56°55.4 ' N. 133°50.6 ' W.

EASTERN, FREDERICK SOUND, KEKU STRAIT, first stream S. of E 32.

MAJOR SPECIES

ESCAPEMENT TIMING

BOTTOM

STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 5.1 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

#### INTERTIDAL ZONE

AVERAGE WIDTH/DEPTH

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

AERIAL SURVEY NOTES

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

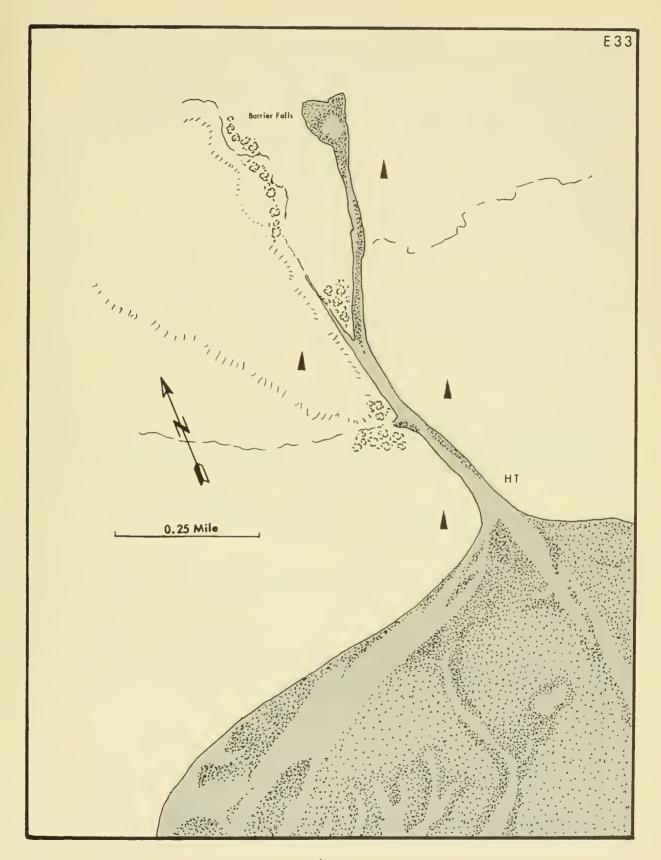
LENGTH ACCESSIBLE 0.2 mile. AVERAGE WIDTH/DEPTH 12'/10".
GRADIENT AND VELOCITIES Moderate.
BOTTOM Rock and gravel mixtures.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES This stream was reported barren in 1946.

# ESCAPEMENT RECORD

Date	SUR VEYED Miles	Ву	PIN Live	K Dead	CHU Live	JM Dead	OTHER SPECIES Live	REMARKS
1941 Sept 25 1954	0, 2	<b>F</b> RI	10,000					
Sept 20 1953	G 0.5	FWS	1, 300	1,000	400	700		
Sept 9	G 0.7	FWS	30		25			Few dead



EASTERN, FREDERICK SOUND, KEKU STRAIT, HAMILTON BAY, NE. head of bay.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

ESCAPEMENT TIMING Late, Sept.

SPAWNING FACILITIES Excellent but limited.

STREAM TEMPERATURES Cold-normal range. Observed temperatures: S4° F., 9/11/S1; 52° F., 9/22/51; 48° F., 9/10/52.

VALLEY DESCRIPTION Large, flat muskeg area.

DRAINAGE 27.3 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Extensive tidal flats.

ANCHORAGE Near head of bay in 4 fathoms.

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Impossible to survey this stream from the air due to very dark muskeg water.

#### INTERTIDAL ZONE

LENGTH 0.66 miles to main stream.

AVERAGE WIDTH/DEPTH 1501/15".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Gravel with riffles and shallow holes; lower intertidal streambed composed of fine gravel and sand.

LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS Poor spawning facilities in Section i. All spawning activity in upper 200 yards of each split of river. No spawning below.

GENERAL NOTES The intertidal stream splits at the high tidemark; one split flows directly into the bay while the other one joins the intertidal stream #33A. The upper few hundred yards of both splits contain excellent spawning riffles with medium to fine gravel of the crushed rock type.

# UPSTREAM

LENGTH ACCESSIBLE 0.3 mile to falls. AVERAGE WIDTH/DEPTH 1201/24".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Gravel and boulders.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS There is a spectacular falls about one-third mile upstream from the high tidemark. A large hole is under the falls.

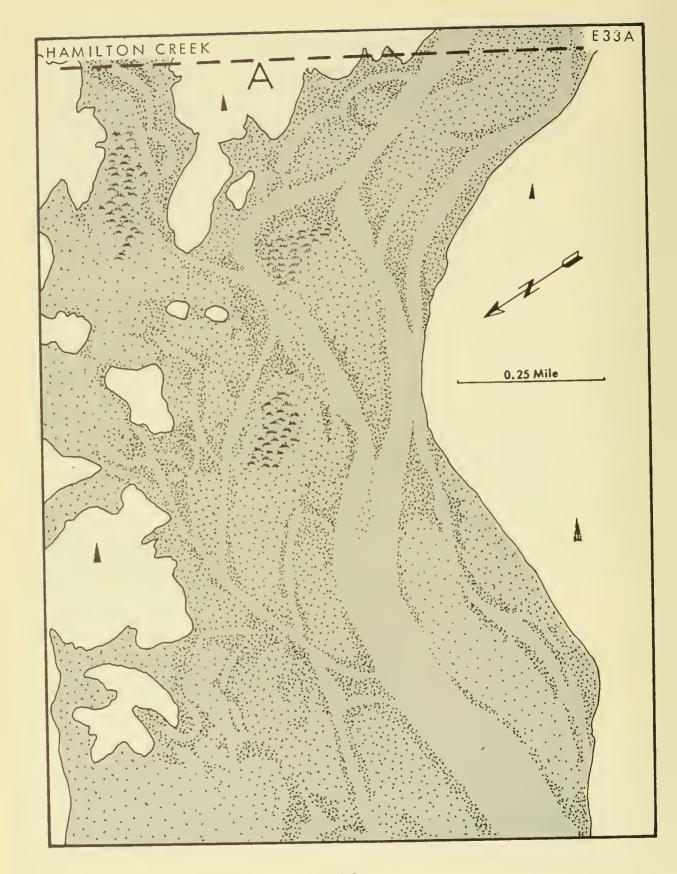
TRIBUTARIES

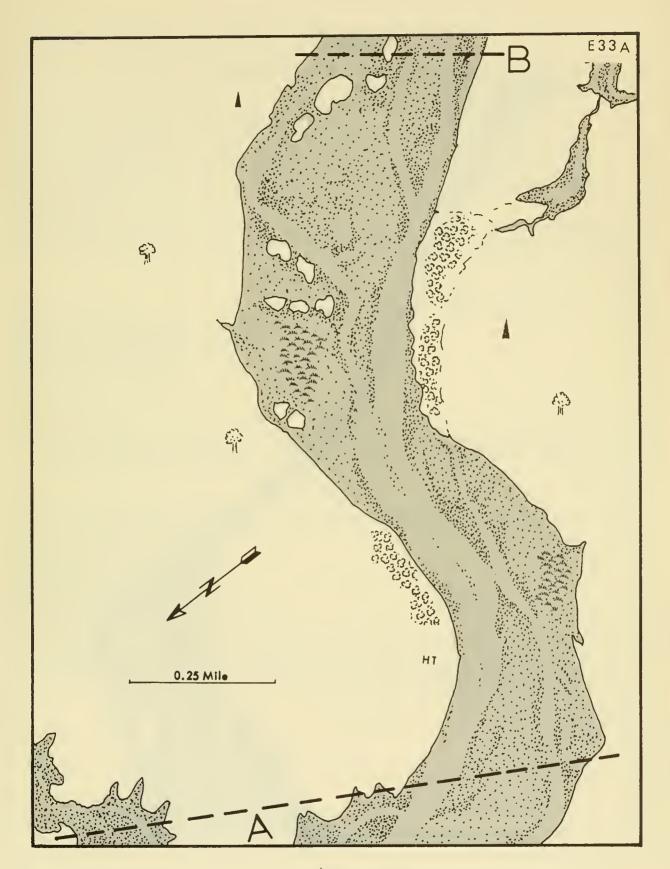
SCHOOLING AREAS

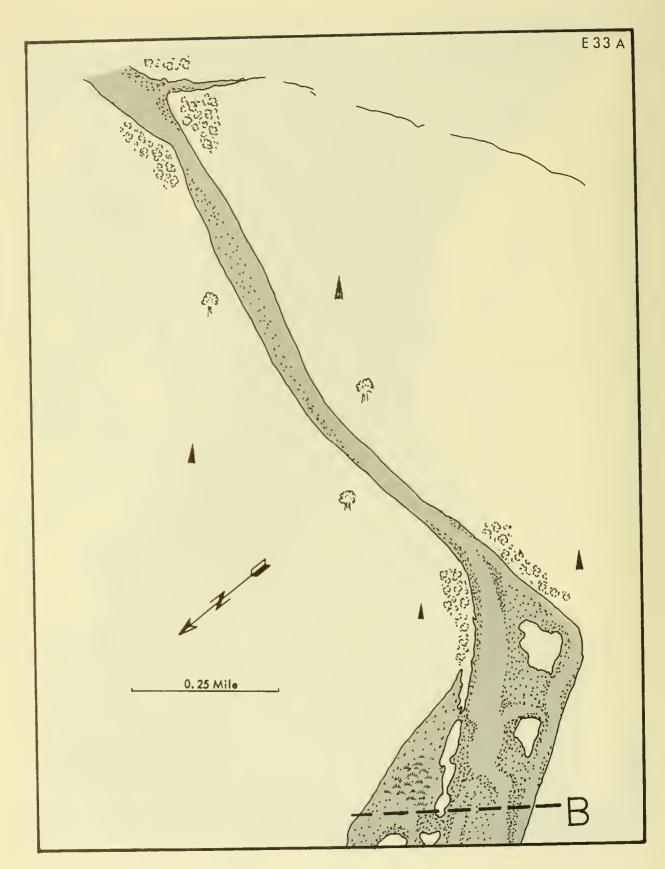
SPAWNING AREAS The upper half of the stream is a continuous riffle of coarse to medium angular gravel providing good spawning area.

GENERAL NOTES The stream pours through high rock cliffs.

Date		SUR VEYED		PIN	IK	СН	JM	OTHER SPECIES	REMARKS
Sept 26         1.5         FWS         Some dead fish           1942         2         2.0         FWS         Many dead pinks           1947         7         No fish observed           1949         No fish observed         No fish observed           1949         Aug 5         FWS         No fish observed           Aug 24         FWS         10,000         Few dead pinks           1950         Aug 31         A         FWS         Poor seeding           Sept 9         2,5         FWS         3,000         Poor seeding           Sept 10         G 2.0         FWS         2,100         17         13         1953         1953         1954 <td< td=""><td>Date</td><td>Miles</td><td>Ву</td><td>Live</td><td>Dead</td><td>Live</td><td>Dead</td><td>Live</td><td></td></td<>	Date	Miles	Ву	Live	Dead	Live	Dead	Live	
Sept 26         1.5         FWS         Some dead fish           1942         2         2.0         FWS         Many dead pinks           1947         7         No fish observed           1949         No fish observed         No fish observed           1949         Aug 5         FWS         No fish observed           Aug 24         FWS         10,000         Few dead pinks           1950         Aug 31         A         FWS         Poor seeding           Sept 9         2,5         FWS         3,000         Poor seeding           Sept 10         G 2.0         FWS         2,100         17         13         1953         1953         1954 <td< td=""><td>1041</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	1041								
1942		1 5	ETAIC						Same doed fish
Oct 2 1947       2.0 FWS       Many dead pinks         1947       No fish observed         1949       No fish observed         Aug 5 FWS       FWS       No fish observed         Aug 24 FWS       FWS       No fish observed         Sept 29 FWS       FWS       Few dead pinks         1950       Poor seeding         Sept 9 2.5 FWS       3,000         1952       Poor seeding         Sept 10 G 2.0 FWS       2,100 17 13         1953       Sept 9 G 0.2 FWS       25         Sept 10 G 0.5 FWS       1,470 730         1957       No fish observed         Aug 16 A FWS       No fish observed         Aug 9 G 0.2 FWS       300 S0         Aug 15 G 0.2 FWS       400 800         Aug 29 G 0.2 FWS       1,900 2,400         1959       No fish observed		1. 0	1,440						Some dedd fish
Oct 6 1949       To falls FWS       No fish observed         Aug 8 Aug 24       FWS 10,000       No fish observed         Sept 29 FWS 1950       Few dead pinks         Aug 31 A FWS Poor seeding       Poor seeding         Sept 9 25 FWS 3,000       Poor seeding         1952 Sept 10 G 2.0 FWS 2,100 17 13       Poor seeding         Sept 9 G 0.2 FWS 2,100 730       Poor seeding         Sept 10 G 0.5 FWS 1,470 730       Poor seeding         Sept 10 G 0.2 FWS 300 50       No fish observed         Aug 16 A FWS No fish observed       No fish observed         Aug 9 G 0.2 FWS 300 50       No fish observed         Aug 15 G 0.2 FWS 400 800       No fish observed         Aug 29 G 0.2 FWS 1,900 2,400       No fish observed         1959       No fish observed		2.0	FWS						Many dead pinks
1949 Aug S FWS 10,000 Sept 29 FWS 10,000 Sept 29 2,5 FWS 3,000 1952 Sept 10 G 2.0 FWS 2,100 17 13 1953 Sept 9 G 0.2 FWS 2,100 17 13 1953 Sept 10 G 0.5 FWS 1,470 730 1957 Aug 16 A FWS Aug 2 G 0.2 FWS 300 S0 Aug 15 G 0.2 FWS 300 S0 Aug 15 G 0.2 FWS 400 800 Aug 29 G 0.2 FWS 1,900 2,400 1959 Aug 11 A to falls FWS No fish observed	1947								,
Aug 24 FWS 10,000 Sept 29 FWS 1950 Aug 31 A FWS 7 Sept 10 G 2.0 FWS 2,100 17 13 1952 Sept 10 G 2.0 FWS 2,100 17 13 1953 Sept 9 G 0.2 FWS 25 1956 Sept 10 G 0.5 FWS 1,470 730 1957 Aug 16 A FWS 7 Aug 17 Aug 18 G 0.2 FWS 300 S0 Aug 29 G 0.2 FWS 400 800 Aug 29 G 0.2 FWS 400 800 Aug 29 G 0.2 FWS 1,900 2,400 1959 Aug 11 A to falls FWS No fish observed		To falls	FWS						No fish observed
Aug 24			TTATO						35 60 1 1 1
Sept 29       FWS       Few dead pinks         1950       Aug 31       A       FWS       Poor seeding         Sept 9       2,5       FWS       3,000       Poor seeding         Sept 10       G 2,0       FWS       2,100       17       13       1953       1953       1954       1956       1956       1956       1957       1957       1957       1957       No fish observed       1958       No fish observed       1959       No fish observed       1950       No fish observed       1950       No fish observed       1950       No fish observed       1950 <td< td=""><td></td><td></td><td></td><td>10, 000</td><td></td><td></td><td></td><td></td><td>No fish observed</td></td<>				10, 000					No fish observed
Aug 31				10,000					Few dead pinks
Sept 9       2.5 FWS       3,000         19S2       Sept 10       G 2.0 FWS       2,100       17 13         19S3       Sept 9       G 0.2 FWS       25         19S6       Sept 10       G 0.5 FWS       1,470       730         19S7       Aug 16       A FWS       No fish observed         19S8       No fish observed         Aug 2       G 0.2 FWS       300       50         Aug 15       G 0.2 FWS       400       800         Aug 29       G 0.2 FWS       1,900       2,400         1959         Aug 11       A to falls       FWS       No fish observed			1110						1011 acaa piino
Sept 10	Aug 31	Α	FWS						Poor seeding
Sept 10       G 2.0       FWS       2,100       17       13         19S3       Sept 9       G 0.2       FWS       25         19S6       Sept 10       G 0.5       FWS       1,470       730         19S7       Aug 16       A       FWS       No fish observed         19S8       No fish observed         Aug 2       G 0.2       FWS       No fish observed         Aug 9       G 0.2       FWS       400       800         Aug 29       G 0.2       FWS       1,900       2,400         1959         Aug 11       A to falls       FWS       No fish observed		2,5	FWS	3,000					
19S3 Sept 9						7.0			
Sept 9       G 0. 2       FWS       25         1986       Sept 10       G 0. 5       FWS       1,470       730         1987       Aug 16       A       FWS       No fish observed         1988       Aug 2       G 0. 2       FWS       No fish observed         Aug 9       G 0. 2       FWS       300       50         Aug 15       G 0. 2       FWS       400       800         Aug 29       G 0. 2       FWS       1,900       2,400         1959         Aug 11       A to falls       FWS       No fish observed		G 2, 0	FW2	2, 100	17	13			
1986 Sept 10		G 0, 2	FWS			25			
1987 Aug 16		00.2	1,110			20			
Aug 16       A       FWS       No fish observed         1958       Nug 2       G 0.2 FWS       No fish observed         Aug 9       G 0.2 FWS 300       50         Aug 15       G 0.2 FWS 400       800         Aug 29       G 0.2 FWS 1,900       2,400         1959         Aug 11       A to falls       FWS         No fish observed	Sept 10	G 0. S	FWS	1,470		730			
1958 Aug 2	1987								
Aug 2       G 0.2 FWS       No fish observed         Aug 9       G 0.2 FWS 300       50         Aug 1S       G 0.2 FWS 400       800         Aug 29       G 0.2 FWS 1,900       2,400         1959       No fish observed		A	FWS						No fish observed
Aug 9       G 0. 2 FWS 300       50         Aug 1S       G 0. 2 FWS 400       800         Aug 29       G 0. 2 FWS 1,900       2,400         1959       No fish observed		600	EMC						No fiel about
Aug 1S       G 0, 2 FWS       400       800         Aug 29       G 0, 2 FWS       1,900       2,400         1959         Aug 11 A to falls       FWS       No fish observed	_			300		50			No iish observed
Aug 29 G 0.2 FWS 1,900 2,400 1959 Aug 11 A to falls FWS No fish observed									
1959 Aug 11 A to falls FWS No fish observed	_								
		•		,		•			
Aug 28 A to falls FWS No fish observed	Aug 11	A to falls	FWS						
	Aug 28	A to falls	FWS						No fish observed







EASTERN, FREDERICK SOUND, KEKU STRAIT, HAMILTON BAY, SE, head of bay.

MAJOR SPECIES Pink.

OTHER SPECIES

AVERAGE WIDTH/DEPTH 2001/12".

AVERAGE WIDTH/DEPTH 2001/18" (Av.)

ESCAPEMENT TIMING Late, Sept.

SPAWNING FACILITIES Excellent spawning gravels.

STREAM TEMPERATURES Cold-range. Observed temperature: 48° F., 9/10/52.

VALLEY DESCRIPTION

DRAINAGE 65.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Enters Hamilton Bay through fairly extensive grass flats at head of bay.

ANCHORAGE Near the head of bay.

TRAILS AND SURVEY ROUTES Few windfalls. Stream is easy to hike during normal water stages. AERIAL SURVEY NOTES At low tide the intertidal zone of this stream joins #33 through a maze of small channels.

#### INTERTIDAL ZONE

LENGTH 2 miles. GRADIENT AND VELOCITIES Gentle. BOTTOM Gravel and sand in lower portion. LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES A long, meandering stream with many splits and backwater. Upper half composed of medium to fine angular and round gravel. Some deep areas with much silt. Lower portion cuts through extensive tideflats of sand and sllt.

# UPSTREAM

LENGTH ACCESSIBLE 7 miles. GRADIENT AND VELOCITIES Gentle. BOTTOM Gravel. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES

SCHOOLING AREAS Holes throughout system.

SPAWNING AREAS Generally good spawning gravel with almost continuous riffles; some boulders and bedrock in upper mile; numerous holes and deep areas.

GENERAL NOTES A mile above high tide, there is one-third mile of extensive splits, bars, riffles, and deep areas. This is a large stream with numerous gravel bars. Primarily a pink stream.

Date	SURVEYEI Miles	Э Ву	P <b>INI</b> Live	ζ Dead	CHU Live	M Dead	OTHER SPECIES Live	REMARKS
1944 Sept 23	2.0	FWS	20,000					
1946 Nov 2		FWS						No fish observed
1947	2.0	ESAZC						NT- (*-1 - 1 1
Oct 6 1949	3. 0	FWS						No fish observed
Sept 29 1950		FWS						Seeding poor
Aug 31 1951	A	FWS						Few fish at mouth
Sept 11	0.3	FWS	300		300			
Sept 22 1952	0.3	FWS	900	1,175	160	150		
Sept 10 19 <b>53</b>	0.3	FWS	476	5	62	3		
July 20	A 2.0	FWS						50 fish in riffles
Sept 9 1954	G 2, S	FWS	250		10		2 cohos	
Sept 21 1955	G 1.0	FWS	47					
Sept 8	G 0.5	FWS	2,000					
Sept 12	G 0.5	FWS	2,000					
Oct 4 1986	G 2.5	FWS	300					
Sept 16 1957		FWS	s,000					
Aug 16	A length	FWS						Some fish- doubtful number
Aug 20 1958	G 2.0	FWS	300		200			nanoei
July 18	G 0.2	FWS			S0			
July 25	G 0.S	FWS			300			
Aug 2	G 0.2	FWS	300		700			S00 pinks and 300 chums off mouth
Aug S	G 0.2	FWS	600		850			400 pinks and 1,300 chums off mouth
Aug 9	G 0.5	FWS	900		1,200			400 pinks and 300 chums below high tidemark
Aug 1S	G 0.5	FWS	1,900		2,000			delett ingir tidelilar
Aug 26		FWS	2,000		_,			3,000 fish in stream
Aug 29	G 0.2	FWS	450		900			.,
Aug 29 1959	A 0.2	FWS	300		2,000			
Aug 1	A 1.0	FWS						>800 in stream - water
1962								dark
Aug 10	A 1.0	ADF						No salmon observed

E 35

EASTERN, FREDERICK SOUND, KEKU STRAIT, PORT CAMDEN, SE. head.

MAJOR SPECIES Chum.

OTHER SPECIES

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH 30'/10".

ESCAPEMENT TIMING Late, Sept.-Oct.

SPAWNING FACILITIES Poor spawning areas at low water stages.

STREAM TEMPERATURES

VALLEY DESCRIPTION Low, flat valley between steep mountains. Stream fans out over a half mile tideflat.

DRAINAGE < 2 square miles.

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES A typical chum salmon stream. A third mile back in the valley, the stream ceases to exist and any water flows beneath gravel bars. Survey difficult due to turbulence.

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

# UPSTREAM

LENGTH ACCESSIBLE 0.3 mile.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Rock.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Rockwell's 1946 report states "stream is an example where logging operations spoiled the salmon run."

# PORT CAMDEN CREEK

# ESCAPEMENT RECORD

	SURVEYED		PINI	ζ	CHU	M	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
		,						
1942								
Sept 29 1943	0. 3	FWS			20,000			25,000 at mouth
Sept 15 1947	0.3	FWS			15.000			
Oct 6 1948		FWS			40,000			
Oct 3 1953		FWS						30,000 at mouth
Sept 10	G 0. 2	FWS			500			
Sept 19	G 0. 2	FWS			5,000			
Oct 20 1954	G 0. 2	FWS			500			
Sept 1	G 0. 2	FWS			500			
Sept 9	G 0. 1	FWS			2,500			
Sept 10	G 0.1	FWS			5,000			
Sept12	G 0.2	FWS			5,000			
Sept 15	G 0.2	FWS			5,000			
Sept 19	G 0. 1	FWS			10,000			
Sept 19	G 0. 1	FWS			8,000			
Sept 22	G 0. 2	FWS			15,000			
Sept 22	G 0.5	FWS			15,000			
Sept 26	G 0.5	FWS			25,000			
<b>S</b> ept 29 1955	G 0. 2	FWS			25,000			
Sept 25	G 0.5	FWS						1,000 chums at mouth
Oct 5 1956	G 0, 2	FWS	3,500					25 chums at mouth
Sept11	G 0.2	FWS			50			
Oct 1 1957	G 0.1	FWS			40,000	2,000		
Sept 21	G 0. 2	FWS			6,000			5,000 at mouth
Sept 25 1958	<b>G</b> 0. 1	FWS			33,000			20,000 at mouth
<b>A</b> ug 29	A length	FWS						No fish observed
Sept 12	G 0. 2	FWS			400			
Sept 15	G	FWS			1,000			Tidal zone
Sept 16	G 0.5	FWS			4,500			1,000 chums off mouth
Sept 25 1959	G 1.0	FWS			7,000			1,000 dead
Sept 14	G 0.5	FWS			1,800			3,000 chums in tidal zone
Sept 23	G 1.0	FWS			15,000			
Sept 25	G 0.5	FWS			1,600			1,000 chums on tideflats
Oct 10 1960	G 0.5	FWS			5			
Aug 25	A mouth	ADF						No fish observed
Sept 6	A 0.5	ADF						No fish observed
Sept26	G mouth				75			
Sept 26	A length							No fish observed

# ESCAPEMENT RECORD - Continued

	SURVEYED	P	NK	CHUM	OTHER SPECIES	REMARKS
Date	Miles	By Live	Dead	Live Dec	ad Live	
1961						
Sept 9	A 0.5 A	DF		600		600 at mouth
Sept 14	A length A	DF		500		25 chums at mouth
Oct 5 1962	A length A	DF		200		
Sept 18	A bay A	DF				Scattered jumps; turbu- lent water
Sept 28 1963	A mouth A	DF				Too rough for survey
Aug 29	A A	DF				S00 chums at mouth
Oct 3	G length A	DF				160 chums in intertidal zone

S6° 38.7' N. 134° 03.3' W.

E 3SA

EASTERN, FREDERICK SOUND, PORT CAMDEN, SW. arm, head.

MAJOR SPECIES Chum. OTHER SPECIES Coho.

ESCAPEMENT TIMING Late, Sept. to Nov.

SPAWNING FACILITIES Excellent.

STREAM TEMPERATURES

VALLEY DESCRIPTION Flat with beaver marshes; extends to Pillar Bay.

DRAINAGE Estimated about 1 square mile.

STREAM MOUTH IDENTIFICATION Extensive tidal mudflats.

ANCHORAGE Off flats.

TRAILS AND SURVEY ROUTES Can be waded at most stream levels.

AERIAL SURVEY NOTES Easy to survey.

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES Moderate.
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS In upper tidal area, and lower reaches of mudflats.

GENERAL NOTES

#### UPSTREAM

AVERAGE WIDTH/DEPTH

LENGTH ACCESSIBLE 0.2 mile.

GRADIENT AND VELOCITIES

BOTTOM Fine gravel.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS Beaver dams are a continuous problem.

TRIBUTARIES None of importance.

SCHOOLING AREAS Few.

SPAWNING AREAS Limited but of excellent quality.

GENERAL NOTES Stream has been unbelievably good producer in past, supporting heavy "fall fishing" for late chums. Has been poor in the past few years despite complete closure. Natives report heavy subsistence take before white man's fisheries developed. Many old smoke houses still exist.

SURVEYED PINK CHUM OTHER SPECIES	REMARKS
Date Miles By Live Dead Live Live	
1052	
1953 Oct 20 G 0. 2 FWS 1,500	
Oct 20 G 0. 2 FWS 1,500	
Sept 17 G 0. 2 FWS 2,000	
Sept 22 G 0.2 FWS 4,000	
Sept 29 G 0. 2 FWS 9,000	
1988	
Aug 3 G 0. 2 FWS 10	
1956	
Oct 1 0.5 FWS 10,000 1S0	
1957	
Sept 17 G FWS 2,500	
	00 at mouth
Sept 25 G 0. 2 FWS 15,000	
	sands dead
Oct 14 G 0. 2 FWS 9,000 70,000	
	sh observed
1958	
Sept 12 G 0. 2 FWS 4	
Sept 17 G 0.5 FWS 400	
Sept 25 G 0. 5 FWS 1,500 125 500 a 1959	nt mouth
Sept 1S G 0. 2 FWS 1, 200	O chums in tidal zone
Sept 23 G to	
beaver dam FWS 1,500	O chums in tidal zone
	ead fish
Oct 10 G FWS 12 de 1960	ead fish
Aug 25 A length ADF No fix	sh observed
	sh observed
Sept 22 A length ADF No fig	sh observed; no
jumps	s in bay
1961	
	chooled at mouth
· · · · · · · · · · · · · · · · · · ·	ools, 800 at mouth
	0-6,000 off mouth
<u>,                                      </u>	0 dead off mouth
Oct S A length ADF 300	
1962	
Sept18 A length ADF 11,000	0.7.000 :
	0-7,000 in intertidal
1963 zone	ch observed stream
	sh observed; stream
·	no jumps uate water

EASTERN, FREDERICK SOUND, PORT CAMDEN, E. shore.

MAJOR SPECIES

ESCAPEMENT TIMING

SPAWNING FACILITIES

STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 12.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

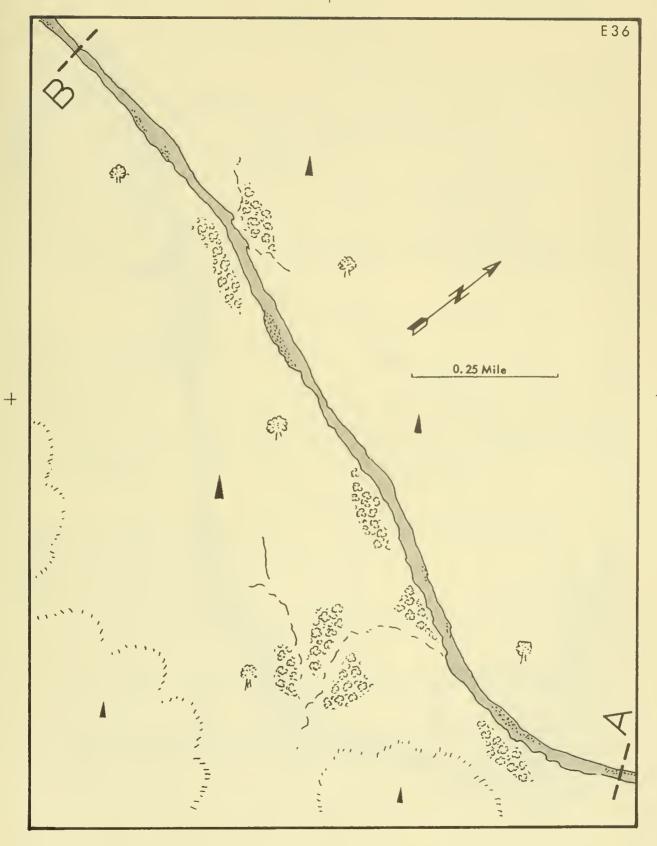
GENERAL NOTES

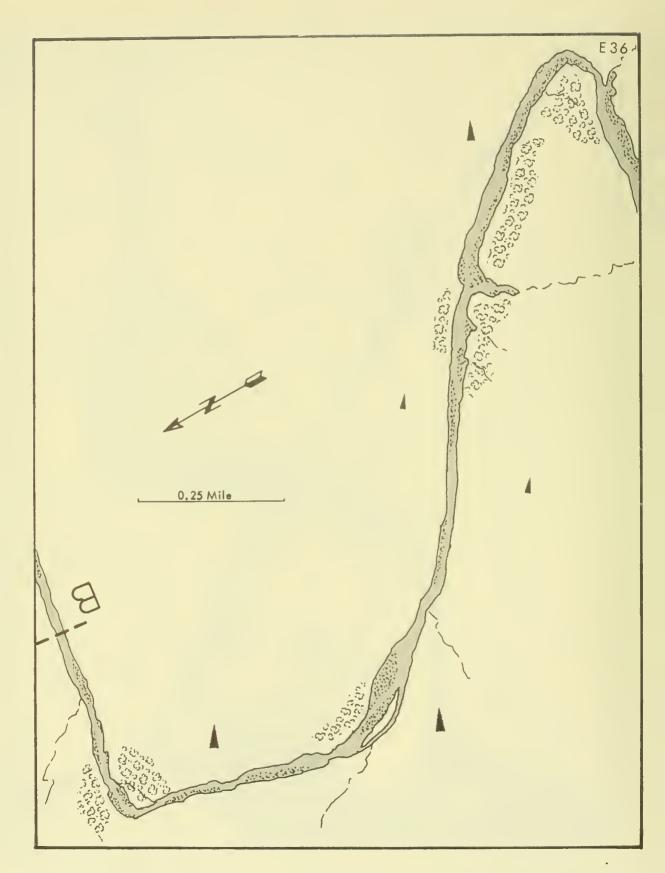
AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH

	SURVEYED	•	PIN	K	CHU	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1955								
Sept 6 19S6	G 0.5	FWS	1,000					
Sept 11	0.5	FWS	1,920		1,280			
Oct 1		FWS	150	600	250	300		
1957								
Sept 18	G 0. 2	FWS	200		1,800			
Sept 22	G 0.7	FWS			2, 620			
Oct 12	G 0.2	FWS						No fish observed
1988								
Aug 29	A to falls	FWS			140			
Sept13	G 0.2	FWS			1,500			150 chums off mouth
Sept16 1959	G 1.5	FWS	100		350	150		
Sept15	G 0.5	FWS	775		25			No dead







EASTERN, FREDERICK SOUND, KEKU STRAIT, KADAK BAY, Head.

MAJOR SPECIES Pink.

OTHER SPECIES Chum, coho, trout, steelhead.

ESCAPEMENT TIMING Middle.

SPAWNING FACILITIES Excellent spawning riffles in first half mile. Intertidal zone affords only limited spawning facilities.

STREAM TEMPERATURES Warm range. Observed temperature: 56° F., 9/7/53.

VALLEY DESCRIPTION Broad, heavily timbered valley. Flat musked valley.

DRAINAGE 51.5 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Enters Kadak Bay through an extensive mudflat in the SW. corner of the bay.

ANCHORAGE Anchorage is available at the mouth of Kadak Bay in 8 fathoms of water.

TRAILS AND SURVEY ROUTES At normal water levels, large bars are exposed and the stream is easy to travel.

AERIAL SURVEY NOTES The lower half mile of the stream is subject to extreme flooding as evidenced by large, high bars, deep holes, and huge windfalls piled up on the bars. Discolored water usually makes surveying difficult.

#### INTERTIDAL ZONE

LENGTH At low tide 1.7 miles.

AVERAGE WIDTH/DEPTH 30'/10".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Gravel, silt, and algae.

LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS Schooling is done primarily off the mouth of the stream due to fairly shallow intertidal area.

SPAWNING AREAS The stream affords limited spawning facilities. The upper 0.1 mile is quiet and deep with much silt and algae. Below this, there is about a half mile of occasional short spawning riffles with medium to large angular gravel and considerable algae.

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE Estimated 7 miles. AVERAGE WIDTH/DEPTH 30'/10".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Gravel, sand, and silt; some bedrock and boulders.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS Several large windfalls and large gravel bars.

TRIBUTARIES This is a very large stream entering the bay in 2 branches. About 2.5 miles from the high tidemark, there is a fairly large tributary to the main stream.

SCHOOLING AREAS Some deep pools in first half mile.

SPAWNING AREAS Excellent riffles of medium to coarse, angular gravel in first half mile. Then a half mile of shallow, quiet water with fine gravel, sand, and silt. Excellent spawning riffles above this; medium, angular gravel on riffles and occasional pools.

GENERAL NOTES This is one of the key streams of this area and can be considered a heavy producer.

A Forest Service cabin is at the head of the tidewater on the S. bank. This system was mapped and surveyed in 1962 by ADFSG Biological Research Division.

# KADAK CREEK

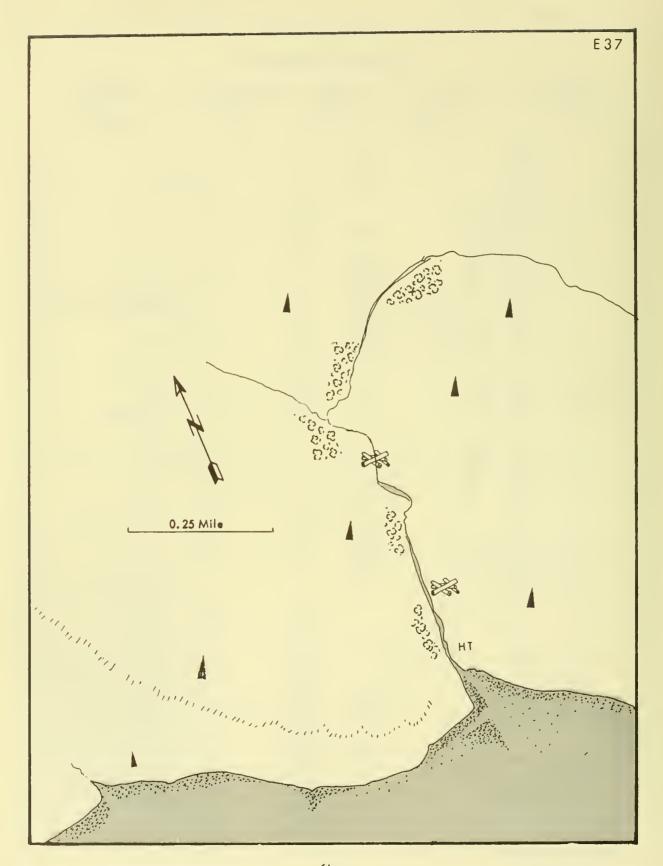
# ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aerial surveys by A]

Date	SUR VEYED Miles	Ву	PII Live	NK Dead	CHU Live	IM Dead	OTHER SPECIES Live	REMARKS
	5.235	-,						
1940 Aug 25 1941		FWS	40,000					
Sept 26 1942	3.0	FWS	73,600		9,000			1,000 cohos at mouth
Sept 30 1943	1.5	FWS	75,000		5,000			S00 at mouth
Sept 1S 1944	3.0	FWS	60,000		40,000			50,000 at mouth
Sept 24 194S	0.5	FWS	20,000					Seeding fair
Sept 26 1946	1.0	FWS	200,000		5,000		1, SOO cohos	
Oct 2 1947	1.0	FWS	100,000		10,000		S00 cohos	
Oct 6 1948	1. S	FWS	100		12,000			
Aug 25 Oct 3 1949	1. S	FWS FWS	S00 1S0		1,000 2,000			
Aug 5	A	FRI	1,000					
Aug 31 Sept 29 1953	A A	FRI FRI	100,000					
Aug S	A 4.0	FWS	1,500		S00			
Sept 7 Sept 10 1954	A 1. 2 G 1. 0	FRI FWS	6,300 1,S00	S	8S 200	10		Exploratory survey
Sept 9	6.0	FRI	9,000		some			8,000 pinks at mouth
Sept 17 195S	S. 0	FRI	13,000		none			None off mouth
July 10	G 0.7	FWS	18		6			
July 15	G 1.2 G 1.5	FWS FWS	200 750		1 000			
July 22 July 23	A 2.0	FWS	200		1,000			
July 25	G 2. S	FWS	1,000		2,000			
July 30	G 1.5	FWS	2,000		s,000			
Aug 1	A 4.0	FWS	3,500		1,500			None at mouth
Aug 1	0.1	FW5	2,000		7,000			
Aug 4	G 1. S	FWS	3,000		10,000			
Aug 8	G 0. S	FW5	3,500		10,000			
Aug 11 Aug 15	G 0.5 G 1.0	FWS FWS	3,500 4,000		8,000 5,000			
Aug 18	G 1.0	FWS	8,000		4,000			
Aug 21	G 0. S	FW5	15,000		1,000			5 pinks at mouth
Aug 24	G 0.S	FWS	25,000		1,000			8 pinks at mouth
Aug 30	G 0.5	FWS	75,000		1,000			8 pinks at mouth
Sept 4	G 1.0	FWS	25,000					O miming of an extit
Sept 6	G 1.0	FWS	90,000		1,000			8 pinks at mouth
Sept 9	G 1.0	FWS	5, <b>0</b> 00					8,000 pinks at mouth

62

	URVEYED			NK	СН		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1956								
July 21	G 0. 2	FWS			30			
Aug 1	0.2	FWS			4			
Aug 4	1.0	FWS			25			
Aug 11	1.0	FWS	125		30			
Aug 15	1.0	FW5	500					
Aug 26	1.0	FWS	2,000					
Aug 29	7.0	FWS	4, 356		132			
Sept 2	0.5	FWS	3,000					
Sept 5	0.5	FW5	9,000		1,000			
Sept 7	1.0	FWS	10,000		1,000			
Sept 10	1.0	FWS	12,000		1,000			
Sept11	2.0	FWS			13,000			5,000 pinks at mouth
Sept12	1.0	FW5	11,000		1,000			
Sept15	1.0	FW5	12,500		2,000			
5ept16	2. 0	FWS	2, 250		12,750			
Sept18	1.0	FWS	8,500		3,000			
1957								
July 24	G 2.0	FW5	3,000					
July 25-29	G 6.0	FWS	3,000		500			1 000 1 1
Sept 4 1958	A 1.5	FWS	5,000		1,000			1,000 in bay
Aug 26	A 1.0	FWS	4,000					
Aug 29	A 2.0	FW5	4,500					
5ept 12	A length		5,000					
Sept 16	G 0.7	FW5	30		4			
Sept 17	G 1.5	FWS	40		65			
1959	C 0 1	THATC	<b>co</b>		50			
July 19	G 0. 1	FW5	60		50			
July 25	G 0. 2	FWS	2,500		800			
Aug 2 Aug 9	G 0. 2 G 0. 2	FWS FWS	1,000		1,500			
Aug 9 Aug 16	G 0. 1	FWS	1,500		1, 200			No fish observed
Aug 22	G 0.5	FWS	3,000		1			No dead
1960			3,000		1			
Aug 29 1961	A 0.5	ADF						Pinks present
July 23	A 0.2	ADF						500-600 salmon at mouth
Aug 17 1962	A 2.0	ADF	1,000					5,000 in intertidal zone
July 28	A 3.0	ADF			100			50 in intertidal zone
Aug 8	G 13.0	ADF			50		300 cohos	8,000 pinks at mouth
Aug 10 1963	A 1.0	ADF						Stream dark, heavy rain
Aug 9	A 4.0	ADF	8,000		300			None at mouth; 200 in intertidal zone
Aug 29	A 1.0	ADF						3,000 in intertidal zone; peak of run past



56°53.7' N. 134°11.1' W.

ADF STAT. No.

E 37

EASTERN, FREDERICK SOUND, SAGINAW BAY, 4 miles from head on N. shore.

MAJOR SPECIES Pink.
ESCAPEMENT TIMING
SPAWNING FACILITIES Negligible.
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES

# OTHER SPECIES

# INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

AERIAL SURVEY NOTES

AVERAGE WIDTH/DEPTH

SPAWNING AREAS

GENERAL NOTES

### UPSTREAM

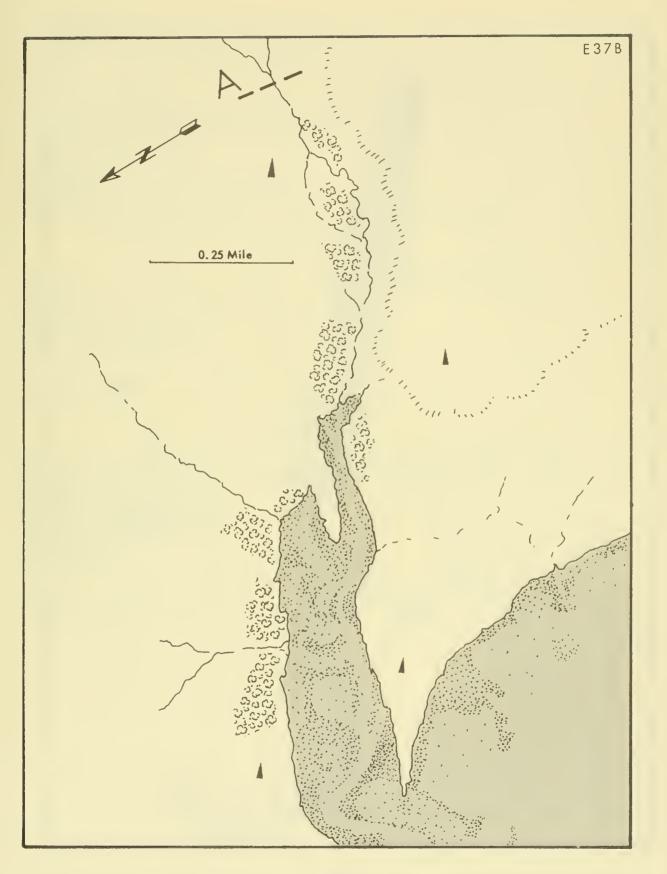
LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM Rocky; some gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

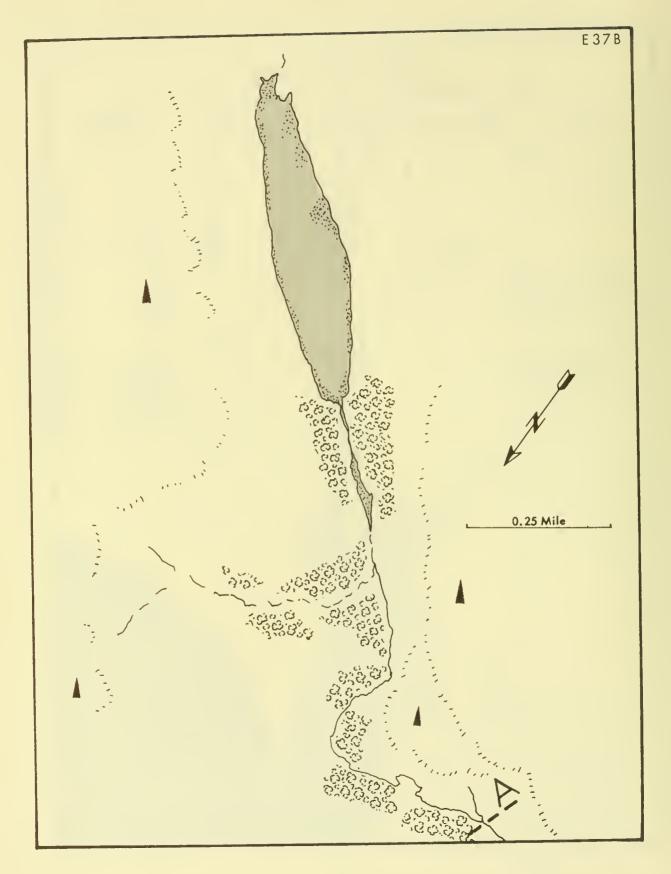
AVERAGE WIDTH/DEPTH 14'/8".

SPAWNING AREAS Poor.

GENERAL NOTES This stream is so very small that its value as a spawning area is neglible.

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1941								
Sept 24 1942	0. 1	FWS	1,000					
Sept 26 1955	0. 1	FWS	300					
Sept 4	G 0.5	FWS	2,000					
Sept 5 1956	G 0.5	FWS	5,500					
Aug 14		FWS						Pinks school at mouth
Aug 30		FWS						No fish observed
Sept 6	0.2	FWS						3,000 pinks, 1,000 chums at mouth
Sept 13 1957		FWS	300					at mount
July 24-31	G 1.0	FWS						No fish observed
Aug 17	A 1.0	FWS						No fish observed
Sept 13 1958	A bay	FWS						No fish observed
Aug 10	G 0.2	FWS						No fish observed





EASTERN, FREDERICK SOUND, SAGINAW BAY, 3 miles from head on N. shore.

MAJOR SPECIES Pink. OTHER SPECIES
ESCAPEMENT TIMING
SPAWNING FACILITIES Small but fairly good spawning stream.
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES Easy to examine unless at high flood stage.

### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

AERIAL SURVEY NOTES

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 1 mile. AVER
GRADIENT AND VELOCITIES Moderate current.
BOTTOM Sand to coarse gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS Good.

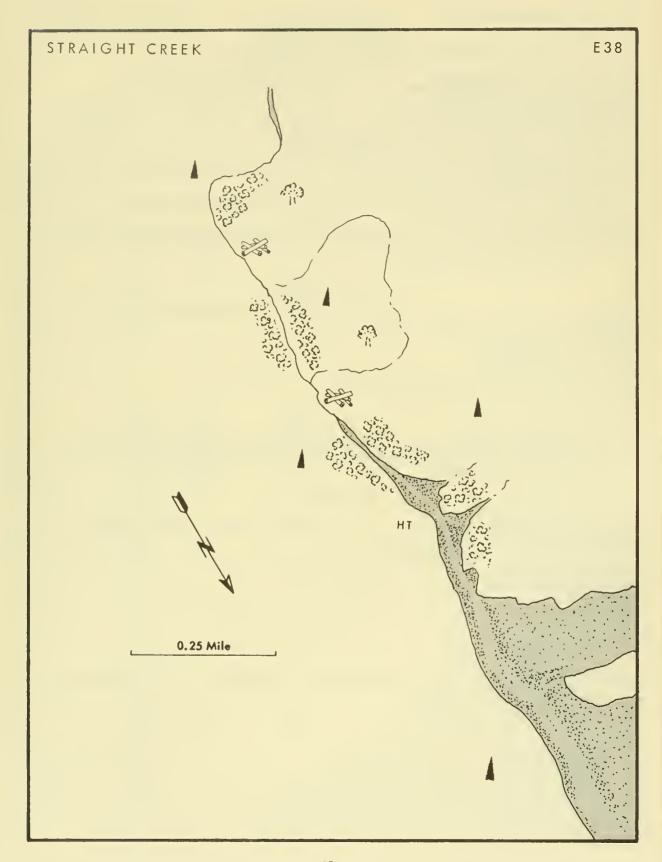
GENERAL NOTES

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH 8'/8".

E 37B

Date	SUR VEYEI Miles	Ву	PIN Live	IK Dead	CHU Live	JM Dead	OTHER SPECIES Live	REMARKS
1942								
Sept 25	1.0	FWS	10,000					
1949			,					
Sept 30	1.0	FWS						
1955								Seeding excellent
Sept 17	G 1.0	FWS	8,000					
1957			•					
Aug 17	A 0.5	FWS						
Sept 11	A 0.2	FWS						No fish observed
								No fish observed



EASTERN, FREDERICK SOUND, SAGINAW BAY, E, corner of head.

MAJOR SPECIES Pink, chum. ESCAPEMENT TIMING Middle-late. OTHER SPECIES Coho.

SPAWNING FACILITIES Poor.

STREAM TEMPERATURES

VALLEY DESCRIPTION Narrow valley with steep hillsides on E. side; more gentle on the W. side. Valley is heavily timbered with a few scattered muskegs.

DRAINAGE 2.5 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION The stream enters the head of Saginaw Bay very close to the mouth of 38A running through an extensive mud tideflat.

ANCHORAGE Anchor about midway between the shores of the head of bay in 10 fathoms. Best to lay at old cannery float.

TRAILS AND SURVEY ROUTES Walking not difficult except where there are many windfalls. AERIAL SURVEY NOTES Poor stream for aerial survey above the intertidal area due to very dark water and heavy overstory of brush.

#### INTERTIDAL ZONE

LENGTH

AVERAGE WIDTH/DEPTH 251/12".

AVERAGE WIDTH/DEPTH 81/2"-4".

GRADIENT AND VELOCITIES Sluggish.

BOTTOM Mud and silt.

LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS Primarily off stream mouth.

SPAWNING AREAS Poor.

GENERAL NOTES The intertidal zone is long and flat covering about three-quarters of a mile of the stream. The upper area of this zone has a bottom of fine sand and silt. The stream is about 30 feet wide at the mouth.

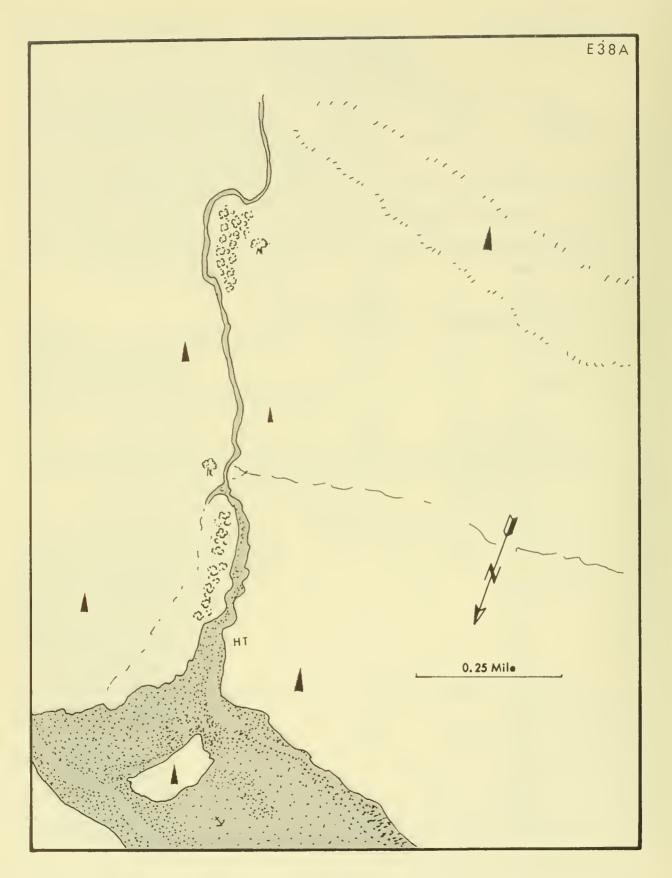
#### UPSTREAM

LENGTH ACCESSIBLE 3 miles. GRADIENT AND VELOCITIES Gentle. BOTTOM Silty gravel and brown algae. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES The stream is timbered for about 1.5 miles then runs into open country ending in muskeq.

	SUR VEYEL	)	PIN	īκ	СН	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1941								
Sept 24 1942	1.5	FW5						Seeding good
Sept 26 1943	1.0	FWS	20,000	8,000				
Sept 14 1950	1.0	FWS	300					
Sept 18 1953	0.7	FWS	110		23			
Aug 5	A 2.0	FWS	500		100			
Aug 17	A 1.5	FWS	500		500			
Sept 13 1954	0.7	FWS	100		20			
Sept 18 1955	G 0.5	FWS	650		3			
	No reco	rd						
1956		THAT	05		10			
Aug 29	0.7	FWS	25		12			
Sept 2	0.7	FWS	3,700		300			
Sept 4	1.5	FWS	2,600		700			
Sept 4	1.5 1.5	FWS	5,000 2,600		700			20,000 pinks at mouth
Sept 5 Sept 6	1.5	FWS FWS	5,000		700			20,000 pinks at motal
Sept 13	1. 3	FW5	3,000					
1957		1 113	3,000					
July 28	G 1.0	FWS						No salmon observed
Aug 23	G 2.0	FWS						No salmon observed
Sept 11 1958	A 0. 2	FWS	50					
Aug 10	G 0. 2	FWS						No salmon observed
Aug 26 1959	A 0.5	FWS						No salmon observed
<b>A</b> ug 9 196 <b>0</b>	G	FWS						No salmon observed
Aug 25	A	ADF						No salmon observed; no jumps in bay
Aug 29 1961	A mouth	h ADF						No salmon observed
July 23	A 1.0	ADF						500 salmon in intertidal
Aug 9	A	ADF						2,000 in intertidal
Sept 8 1962	G 2.5	ADF	2,500		600			
<b>A</b> ug 10	A 1.0	ADF						Few pinks in stream
Aug 29	A 0.5	ADF						200 in intertidal
Sept28 1963		ADF						No salmon observed
Aug 9	G 0. 2	ADF						No salmon observed; jumps at mouth; a few chums in intertidal zone



EASTERN, FREDERICK SOUND, SAGINAW BAY, middle stream at W. corner of head.

MAJOR SPECIES Pink. OTHER SPECIES Chum.
ESCAPEMENT TIMING Middle, Aug.-Sept.
SPAWNING FACILITIES Good spawning areas.
STREAM TEMPERATURES Normal range. Observed temperature: 52° F., 9/7/49.
VALLEY DESCRIPTION
DRAINAGE 7.2 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE Anchor in midbay near head in 10 fathoms.

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES Gentle.
BOTTOM Gravel; much algae of various types.
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE

GRADIENT AND VELOCITIES Gentle.

BOTTOM Predominantly gravel; occasional sections of bedrock.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES

SCHOOLING AREAS

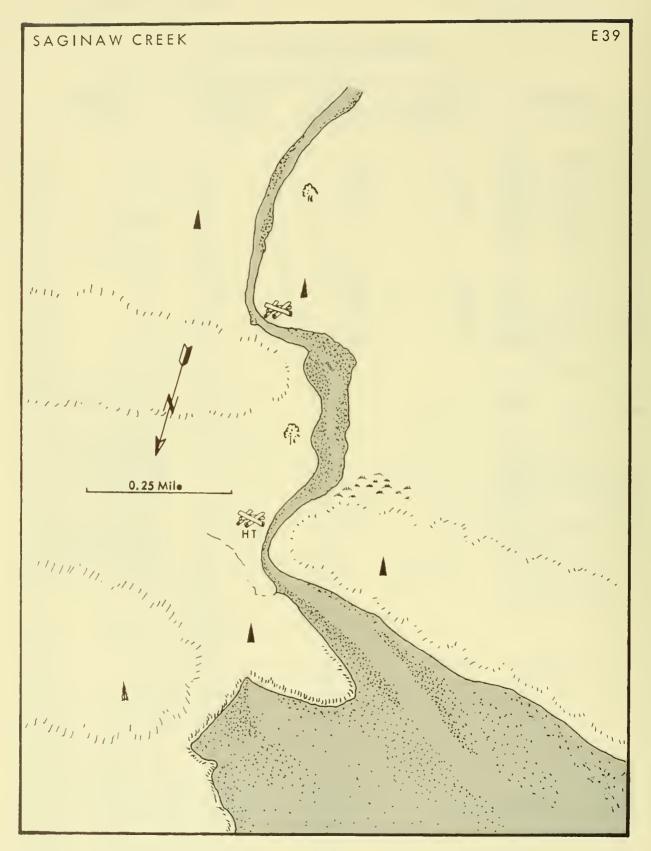
SPAWNING AREAS Suitable spawning areas throughout distance surveyed (0.75 mile).

GENERAL NOTES

ESCAPEMENT RECORD

	(		, 5		,	,	, , , .	-, -,
	SURVEYEL		PIN		CHU		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live l	Dead	Live	
1042								
1942 Sept 26	1.5	FWS	30,000					10,000 at mouth
1943	1.5	1.44.2	30,000					10,000 at mouth
Sept 14	1.0	FWS	20,000		5,000			110,000 at mouth
1947								
Oct 5	1.5	FWS	900		100			Seeding poor
1949	C 0 7	TELLE	25		200			
Aug 23	G 0. 7	FWS	1 100	3	300 63	15		
Sept 7 1950	G 0.7	FWS	1, 100	5	03	13		
Sept 18		FWS	110		23			
1951		1	110					
Sept 16	G 0. 2	FWS	8,000		5,000			3,000 chums, 4,000 pink
1952								in estuary
Aug 26	A 1.5	FWS						<250 salmon in stream
Sept 16 1953	0.5	FWS	500		<i>7</i> 5			
Sept 13	G 0.2	FWS	900		10			
1954								
Sept 18	0.7	FWS	4,600				1 coho	
1955								
July 23	<b>G</b> 0. 1	FWS			50			
Aug 1	G 0. 1	FWS			70			2,000 chums at mouth
Aug 2	G 0. 1	FWS						12 chums at mouth
Aug 9	G 1.0	FWS	50		500			100 chums at mouth
Aug 15	G 0.5	FWS	550		12			100 pinks, 2 chums at
4 10	015	THIC	695		<b>CO</b>			mouth
Aug 19	G 1.5	FWS	675		60			200 pinks, 7 chums at mouth
Aug 30	G 1. S	FWS	200		300		4 cohos	5,000 pinks at mouth
Sept 4	G 1.5	FWS	4,000		1,000		1 001105	500 pinks, 50 chums at
ocpt 1	0 1.0	1 1/0	1,000		1,000			mouth
Sept 10	G 1.0	FWS	5,000					1,500 pinks at mouth
Sept 18	G 2.0	FWS	50,000		1,000			, .
Oct 4	G 0.7	FWS	5,500		50			
1956								
Aug 12	G	FWS	150		150			
Aug 19	G	FWS	300		300			Good showing at mouth
Aug 29	G	FWS	1, 200		800			
Aug 30	G	FWS	2,400		1,600			
Sept 3	G 1.5	FWS	73,000		30			
Sept 13 1957	G	FWS	29,000.		300			
July 21	G 0.7	FWS	50		75			
July 22	G 0.7	FWS	50		75			
July 25	G 0.5	FWS	50		75			
Aug 3	G 1.5	FWS	600		1,000			1,000 chums at mouth
Aug 13	G 1.2	FWS	600		1,500			
Aug 17	A 3. 0	FWS	3,500					
Aug 18	G 1.5	FWS	300		700			
Sept 11	A 2.0	FWS	380					
Sept 13	G 0.7	FWS	83		104			

	SUR VEYEI	)	PIN	ıĸ	СН	JM	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1958								
July 27	G 0.5	FWS			16			
Aug 2	G 0.7	FWS			170			
Aug 9	G 1.0	FWS	30		800			
Aug 16	G 1.5	FWS	100		200			
Aug 23	G 0.7	FWS	200		50			
Aug 26	A 0.5	FWS						No fish observed
Sept 12	G 0.5	FW5	13		10			
Sept 18	G 1.5	FWS	8		4			
1959								
Aug 2	A 0.5	FWS	200		200			
Aug 9	G 0. 2	FWS	300		300			
Aug 16	G	FW5	400		400			
Oct 10	G 0.5	FWS	<b>S</b> 9		39			
Season	G	FWS :	17,000		3,000			
1960								
	No record							
1961								
<b>5</b> ept <b>2</b> 1	A	ADF						Stream appears cleaned out
Sept 28	A 1.0	ADF						No fish observed
19 <b>62</b>								
July 28	A 1.0	ADF						300-400 at mouth, 200
								in intertidal zone
July 31	A 1.0	ADF						500 at mouth
Aug 29	A 0.5	ADF						200 in intertidal zone
Sept 28		ADF						No fish observed
1963								
Aug 9	G 0.7	ADF	few		1,500			S00 chums in intertidal
								zone; jumps at mouth
Aug 29	A length	ADF						No fish fish observed in
								stream; 200 in intertidal
								zone



EASTERN, FREDERICK SOUND, SAGINAW BAY, SW. head.

MAJOR SPECIES Pink, chum.

OTHER SPECIES Coho.

ESCAPEMENT TIMING Middle and late.

SPAWNING FACILITIES Good. Excellent spawning riffles of medium-sized round gravel.

STREAM TEMPERATURES Normal range. Observed temperatures: 50° F., 9/7/49; 52° F., 9/8/51; 50° F., 9/21/51; 44° F., 9/30/51; 46° F., 9/11/52; 49.5° F., 9/25/52; 48.5° F., 9/28/52; 50° F., 9/8/53; 57° F., 9/20/53.

VALLEY DESCRIPTION The upper tidal zone pours through a bedrock garge.

DRAINAGE 15.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Enters at head of Saginaw Bay in the SW. corner. Very limited flats area.

ANCHORAGE Anchorage off the stream is fair. Good moorage is available at the cannery float.

TRAILS AND SURVEY ROUTES Logging of drainage area planned.

AERIAL SURVEY NOTES Fair stream for aerial survey during periods of average to low water flow.

## INTERTIDAL ZONE

LENGTH 0.2 mile.

AVERAGE WIDTH/DEPTH 301/18".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Bedrock, gravel, sand, and algae.

LOW TIDE LOCATION

HIGH TIDE LOCATION Small rapids.

SCHOOLING AREAS A long, deep, wide pool is at the upper end, the remainder of the stream being more narrow and shallow with much algae.

SPAWNING AREAS Limited in the intertidal zone.

GENERAL NOTES A skiff can be floated out of the creek at low tide.

#### UPSTREAM

LENGTH ACCESSIBLE 6 miles.

AVERAGE WIDTH/DEPTH 251/12".

GRADIENT AND VELOCITIES Gentle to moderate.

BOTTOM Gravel; some bedrock.

MARKER DISTANCE 1.2 miles.

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES One good-sized branch from the S. is utilized by salmon.

SCHOOLING AREAS

SPAWNING AREAS Good spawning facilities.

GENERAL NOTES Low water at spawning time is occasionally a limiting factor.

## SAGINAW CREEK

## ESCAPEMENT RECORD

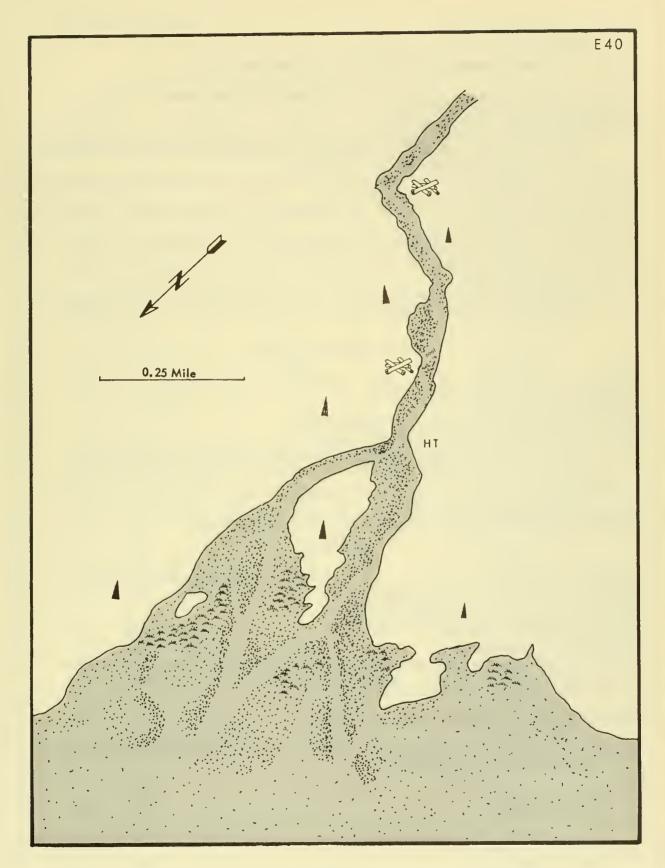
Date	SUR VEYED Miles	Ву	P <b>I</b> N Live	<b>K</b> Dead	CHUN Live	Л Dead	OTHER SPECIES Live	REMARKS
1941								
Sept 24 1942	1.5	FWS						Mostfish dead. High water.
Sept 26 1943	2. 0	FWS	150,000		15,000		500 cohos	50,000 at mouth
Sept 14 1947	3.0	FWS	50,000		S,000			20,000 at mouth
Oct 5	1.5	FWS	S,000		50			Seeding fair
Oct 1 1949		FWS	10,000					Seeding good
Aug 23	G 0. 2	FRI	3,500		12			10,000-20,000 pinks off mouth
Sept 7 1980	G 1.0	FRI	12,700		24			moudi
Aug 31	G 1.2	FRI	1,918	0	50	1		
Sept 18	G 1.2	FRI	1, 228		144			
Sept 19 1951	G 1.2	FRI	3,462	88	76	0		
Sept 8	A 1.2	FRI	5,300	25	239	5		All fresh fish
Sept 21	A 1.2	FRI	6,450	775	970	115		S0% pinks spawning
Sept 30 1952	A 1.2	FRI	1, 100	350	480	390		Pink spawning. 50% chum
Sept11	A 1.2	FRI	5,840	66	89	8		Majority fresh
Sept16	0.5	FWS	1,500		150			
Sept 25	A 0. 2	FRI						Flooding. Poor visibility
Sept 28 1953	A 0. 2	FRI	31	218	16	8		Pink run over. Chum fresh
Sept 8	A 1.2	FRI	3,920	14	195	11		Poor visibility
Sept 20 1954	A 1.2	FRI	1,026	375	210	7		Pink spawning over
Sept 9	A	FRI	7, 200	0	250			
Sept 10	G 0.5	FRI	7, 100		230			A few dead pinks 10,000 pinks at mouth
Sept 18	G 0. 2	FWS	4, \$00					15,000 mixed fish in estuary
Sept 17	G 0.5	FRI	18,450	950	250	115		100 unspawned dead off mouth
1955								
July 25	G 0. 2	FWS			250			200 chums off mouth
July30	G 0.7	FWS			250			200 chums off mouth
Aug 30	A 2.0	FWS			250			No salmon observed
Aug 2	G 0. 2	FWS			250			
Aug 8	G 1.5 G 0.2	FWS FWS	525		750			75 pinks at mouth
Aug 16 Aug 20	G 0. 2	FWS	8,475		25			75 pinks at mouth 500 pinks at mouth
Aug 23	G 2.5	FWS	8,650		23 24			1,500 pinks at mouth
Aug 26	G 2.5	FRI	12,000		24			Salmon in bay
Sept 4	G 2.0	FWS	50,000		1,000			2,000 pink at mouth
Sept 5	G 2.0	FRI	54,000		1,000			Thousands above marker
Sept 10	G 0.5	FWS	15,000					10,000 pinks at mouth
					80			

	SURVEYED		PIN	к сн	UM	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead Live	Dead	Live	
1955							
Sept 18	G 1.0	FWS	75,000	1,000			
Oct 4	G 0.6	FWS	11,000	-,			
1956			•				
Aug 12	G 1.0	FWS	200	200	ı		
Aug 14	G 1.0	FWS	3,600	400			Numerous schools at mouth
Aug 26	G 1.0	FW5	45,000	1 000			>10,000 pinks at mouth
Aug 29	G 1.0	FWS	11,000	1,000			
Sept 7	G 1.0	FWS FWS	111,000 125,000				
Sept 12 Sept 13	G 1.0	FRI	197,000	3,000	ı		
1957	0 1.0	****	157,000	5,000			
July 27	G 0.7	FWS	1,800	100			
Aug 7	G 2.0	FW5	4,000				
Aug 10	G 1.0	FWS	600	50	1		
Aug 22	G 3.0	FWS	3,000	500			50 dead
Aug 27	A mrkr	FRI	2,000				300 at mouth
Sept 2	A mrkr	FRI	500				300 chums at mouth
Sept 4	A 0.5 mrkr	FWS FRI	1,000 300				3,000 chums off mouth
Sept 12 Sept 13	G 1.5	FWS	283	2,018			3,000 chains off moath
Sept 22	G 0.7	FWS	133	2, 202			
1958	00.,		100	_,			
July 26	G 0.2	FWS		25			
Aug 3	G 1.0	FWS	30	200			
Aug 10	G 0.7	FWS	500	400			
Aug 16	G 1.5	FWS	1,000	100			
Aug 23	G 0.7	FWS	1,500				
Aug 26 Sept 9	A 1.0	FWS FWS	300 300				100 off mouth
Sept 12	G 0.5	FWS	225	1,050			100 oil mouth
Sept 19	A	FWS		300			
Sept 21	G 1.5	FWS	70	420		40 cohos	
1959							
July 25	G 0.2	FWS	150	50	)		
July 27	A 1 0	FWS					No fish observed
July 31	G 0. 2	FWS	2,000	500			
Aug 9	G 0.5	FWS	6,000	2,000			
Aug 14	G	FWS	8,000	2,000		30 cohos	
Oct 10 Season	G 0. 2 G	FWS FWS	35,000	8,000		2,000 cohos	
1960	G	rws	33,000	3,000		2,000 cones	
Aug 29 1961	A mouth	ADF					No fish observed
July 23	A 1.0	ADF	800				1,000 salmon at mouth
Aug 9	Α	ADF	5,000				3,000 in intertidal zone
Aug 17	A 2.0	ADF	9,000				
Sept 8	G 2.5	ADF	20,000	500			1,000 salmon in inter- tidal zone

# SAGINAW CREEK - Continued

# ESCAPEMENT RECORD

	SURVEYED		PIN	K	CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1962								
July 17	A mouth	ADF						No salmon observed
July 28	A 2.0	ADF			200			400-500 at mouth, 300 in intertidal zone
July 31	A 1.0	ADF						700 mixed fish in stream, 500 at mouth
Aug 10	A 0.5	ADF						1, 500 at mouth
Aug 13	A 1.5	ADF	6,000					
Aug 20	G 0.5	ADF	6,000					
Aug 29 1963	A 3.0	ADF	7,000					
Aug 1	G 0.2	ADF	900		100			1,000 at mout h; 1,000 in intertidal zone; no fish beyond 0.2 mile
Aug 9	G 1.0	ADF	11,000		2,500			1,500 pinks and 1,000 chums in intertidal zone
Aug 29	A 0.2	ADF	2,000					7,000 new fish in inter- tidal zone
Sept 6	G 0.1	ADF						Stream flooding; im- possible to survey; a few fish at mouth



EASTERN, FREDERICK SOUND, SECURITY BAY, 2 miles from extreme head, E. shore.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

ESCAPEMENT TIMING Middle, Aug.

SPAWNING FACILITIES Good.

STREAM TEMPERATURES Cold-normal range. Observed temperatures: 54° F., 9/6/49; 48.5° F., 8/31/50; 49° F., 9/18/50; 51° F., 9/9/51; 49° F., 9/21/51; 46° F., 9/30/51; 47° F., 9/11/52; 49° F., 9/26/52; 51° F., 9/8/53; 47° F., 9/21/53.

VALLEY DESCRIPTION Heavily timbered valley extending in an easterly direction into Saginaw Bay. DRAINAGE 11.04 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Enters lagoon outlet on E. shore. There is no prominent marker of any type.

ANCHORAGE Anchor large boat in 5 fathoms just abeam of Finger Pt. and proceed in a small boat along E. shore over long tideflats.

TRAILS AND SURVEY ROUTES Unless a skiff is taken into the chuck on high or incoming tide a long walk is involved.

AERIAL SURVEY NOTES Impossible to survey by air due to heavy overstory of brush, except for for the lower 0.25 mile and intertidal area. It is possible to fly through the valley into the head of Saginaw Bay.

### INTERTIDAL ZONE

LENGTH 0.1 mile.

AVERAGE WIDTH/DEPTH 65'/18".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Gravel and sand.

LOW TIDE LOCATION Confluence with lagoon outlet.

HIGH TIDE LOCATION At beginning of timber.

SCHOOLING AREAS Primarily off the mouth and one large pool at head of the intertidal area. Indications are that pinks occasionally move into the upper lagoon off #41 then back down and enter #40.

SPAWNING AREAS Beyond a large, deep hole at the upper end, a long continuous riffle offers good spawning facilities.

GENERAL NOTES Upper intertidal area is used extensively for spawning.

## UPSTREAM

LENGTH 1.5 miles.

AVERAGE WIDTH/DEPTH 551/18".

GRADIENT AND VELOCITIES Gentle to moderate.

BOTTOM Gravel, sand, and bedrock; some silt.

MARKER DISTANCE 0.37 mile to marker.

MARKER IDENTIFICATION

BARRIERS A few windfalls.

TRIBUTARIES One mile upstream just above a 4' rock falls, the stream divides into 2 equal-sized branches, each about 30' wide. Each branch continues through low wooded valleys.

SCHOOLING AREAS Small pools throughout the stream.

SPAWNING AREAS Generally good spawning facilities.

GENERAL NOTES A meandering stream with considerable deep areas and an area of splits and log tangles one—third mile above high tide.

ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aerial surveys by A]

	SURVEYED	)	PIN	ſΚ	CHU	М	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1942								
Sept 21 1943	A 2.0	FWS	10,000					
Sept 13 1945	A 2.0	FWS	2S,000		S,000			
Sept 26 1946	A 1.0	FWS	200,000		10,000		S,000 cohos	
Oct 1 1947	A 1.0	FW5	50,000					
Oct 5 1948	A 1.0	FWS	50					
Oct 2 1949	A 1.0	FWS	300		S0			
Aug 23	G 0. 2	FRI	19		4			Seeding poor
Aug 31	G 1.0	FRI	50,000		S00			Seeding good
Sept 6	G 0.2	FRI	2, 250		6			
Sept 22	G 0. 2	FRI	5,800	180	0			
Oct 1 1950	G 1.0	FRI	15,000		500			
Aug 31	G 0.4	FRI	648	0	12	0		
Sept 18	G 0.4	FRI	3, 370	203	38	0	100 cohos, 4 reds	
Sept 20 1951	G 0. 4	FWS	<b>7</b> S0		167			
Sept 9	G 0.5	FRI	1,210	17	53	0		Estimate probably low
Sept 21	G 0.5	FRI	2,400	275	190	45	30 cohos	70% pinks spawning
Sept 30 1952	G 0.5	FRI	650	810	140	140	20 cohos	Pinks spawning, 60% chum
Aug 26	A 1.5	FWS						<250 fish in stream
Sept 11	G 0.7	FRI	3,450	6	0	1		Flooding. Poor visibility
Sept 16	G 0.5	FWS	8,000	200	10	10	D. ( )	
Sept 26 1953	G 0.7	FRI	95	380	10	12	24 cohos	
Sept 8	G 0.5	FRI	3, 300	0	30	0		Many jumps in bay
Sept 13	G 0.7	FWS	125					
Sept 21	G 0. S	FRI	520	101	0	0		Pink spawning over
Sept 27	G 1.5	FWS	17,500				300 cohos	
Oct 16 1954	G 0.5	FWS			250			
Aug 24	G 0.5	FRI	1, 100					2,000 off mouth
Sept 10	G 0.5	FRI	2,000					14,000 at mouth
Sept18	G 1.0	FWS	7,500	1,000				1,000 fish in estuary
Sept 27	2, 5	FWS	22,600	•			300 cohos	•
1988								
July 30	A 1.0				50			
Aug 13	G 0.2	FWS						100 pinks, S chums at mouth
Aug 17	G 0. 2	FWS						500 pinks, 20 chums at mouth
Aug 19	G 0. 2	FWS	3					750 pinks, 25 chums at mouth
Aug 22	G 0. 2	FWS	7					1,000 pinks, 25 chums at
					Ar	:		mouth

85

D	SURVEYED			NK	CHU		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1988								
Aug 24	G 0. 2	FWS	8		17			1,500 pinks, 35 chums at mouth
Aug 24	G 0.2	FWS	1,900					S,000 pinks at mouth
Aug 26	G 0. 2	FWS	13					1,500 pinks, 30 chums at mouth
Aug 26	G 0. 2	FRI	4,000					2,000 schooled at mouth
Aug 29	G 0. S	FWS	17		2			2,000 pinks, 50 chums at
Aug 31	G 0. S	FWS	1,000					mouth 2, S00 pinks, S0 chums at
arug 01	0 0.0		1,000					mouth
Sept 3	G 0.S		10,000					Pinks present at mouth
Sept 5	G 0. 2	FRI	4S,000					30,000 at mouth. Thou-
Sept 13	G 1.0	FWS	1S,000					sands above marker 10,000 pinks at mouth
Oct 3	G 0.7	FWS	10,000	5,000			25 cohos	10,000 pinks at mouth
19 <b>S</b> 6				·				
Aug 26	G 1.0		,		2			S,000 pinks at mouth
Sept 1 Sept 4	G 1. S G 1. 5	FWS FWS	4, 176 4, 950		3 S			
Sept 7	G 2.5		12, S00		210			2, 250 mixed at mouth
Sept 7	G 0.5		20,000					Many jumps in bay
Sept 8	G 1.0		9,000		38			3,000 pinks at mouth
Sept 11	G 2.0 G 0.2		14,465 60,000		250			1,000 pinks at mouth
Sept 12	6 0. 2	r W 3	00,000					5,000 above marker 20,000-30,000 at mouth
Sept 13	G 4.0	FWS	31, 223		408			2,000 pinks at mouth
Sept 16	G 2.0		31,000		400			
Sept 25	G 1.0				S,000		100	
Oct 2 1957	G 0. 2	FWS	4,000		250		180 cohos	
Aug 17	A 1.0	FWS	1,500					
Aug 27	A	FRI						Few pinks. None off mouth
Sept 2	A	FRI	2					F 1 >C 000 1 1
Sept 12	А	FRI	300					Few chums. >S,000 head of bay
Sept 12	G 1.2	FWS	132		42		2 cohos	
Nov 11 1958	G 0. S	FWS						No fish observed
Aug 10	G 1.0	FWS			30			
Aug 16	G 1.0	FWS			11			
Aug 21 Aug 25	G 1.0 A	FWS FWS	1 <b>S</b>		8			None observed
Aug 26	A 1.0	FWS	300					None observed
Sept 9	G mkr	FWS	300					
Sept 9	A	FWS	300	0				Few chums. None off mouth
Sept12	A length		1,000					3,000 off mouth W. stream
Sept1S	G 0.7	FWS	220		1			100 pinks, 10 chums, S cohos in tidal zone
Sept19	A	FWS	S00	0				None off mouth
Sept23	G 1.0	FWS	<b>7</b> S		10			

	SUR VEYEI		PINI	ζ	CHUM	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live Dea	d Live	
1960		·					
Aug 29	A mouth	h ADF					No fish observed
Sept 12	A 0.2	ADF	500				
Sept 16 1961	G 0.2	ADF	500				
Aug 20	Α	ADF					10,000 mixed fish in chuck
Aug 25	Α	ADF					1,500 salmon at mouth
Sept 8	A	ADF	20,000				
Sept 11	G 2.5	ADF	5,000		50		8,000 salmon in intertidal
Sept 28	A	ADF					1,500 live salmon in intertidal zone
1962							
July 17	A mout	h ADF					No fish observed
Aug 10	A 1.0	ADF					No fish observed
Aug 29	A 1.5	ADF	1,000				200 salmon in intertidal zone
Sept 7	A 1.0	ADF					2, S00 at mouth
Sept 10	G 2.0	ADF	4,500		100		3,800 pinks and 100 chums at mouth
Sept 20 1963	0. 2	ADF					300-400 at mouth
Aug 28	A 1.0	ADF					No fish observed in stream; 24,000 at mouth
Sept 1	G 0. 2	ADF	few				Several thousand at mouth; stream too low for fish to enter

EASTERN, FREDERICK SOUND, SECURITY BAY, extreme head of lagoon.

MAJOR SPECIES Chum.

OTHER SPECIES Pink, coho.

ESCAPEMENT TIMING Middle to very late.

SPAWNING FACILITIES Good.

STREAM TEMPERATURES

VALLEY DESCRIPTION Narrow valley with steep sides. Heavily wooded with many muskegs scattered throughout.

DRAINAGE 7.8 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Stream flows across a wide grass flat and enters approximately in the middle of the extreme head.

ANCHORAGE Refer to stream #40.

TRAILS AND SURVEY ROUTES The stream is difficult to survey during high water because the many splits spread out the fish and dense wild current bushes keep an observer away from the edge of the stream. A fairly good game trail follows the left bank above the stream but it is difficult to see the stream from it.

AERIAL SURVEY NOTES Fair for aerial survey. Enter valley on right side and fly to head of the valley. Salmon in large numbers move to the extreme head of this stream.

#### INTERTIDAL ZONE

LENGTH 0.2 mile.

AVERAGE WIDTH/DEPTH 30'/18\*.

GRADIENT AND VELOCITIES Slow.

BOTTOM Clean gravel on riffles. Clay exposed in deepest holes.

LOW TIDE LOCATION Confluence with lagoon.

HIGH TIDE LOCATION Beginning of timber at edge of grass flats.

SCHOOLING AREAS Primarily in the lagoon off the mouth and throughout the deep water areas of the intertidal area.

SPAWNING AREAS Good spawning throughout.

GENERAL NOTES A few pinks that use this system seem to prefer the fine intertidal gravel.

## UPSTREAM

LENGTH ACCESSIBLE 2 miles.

AVERAGE WIDTH/DEPTH 35'/10".

GRADIENT AND VELOCITIES Moderate to slow.

BOTTOM Gravel. Considerable brown algae on gravel on many riffles.

MARKER DISTANCE No marker.

MARKER IDENTIFICATION

BARRIERS Log jams are a problem at low water levels only.

TRIBUTARIES None.

SCHOOLING AREAS Many pools throughout the length.

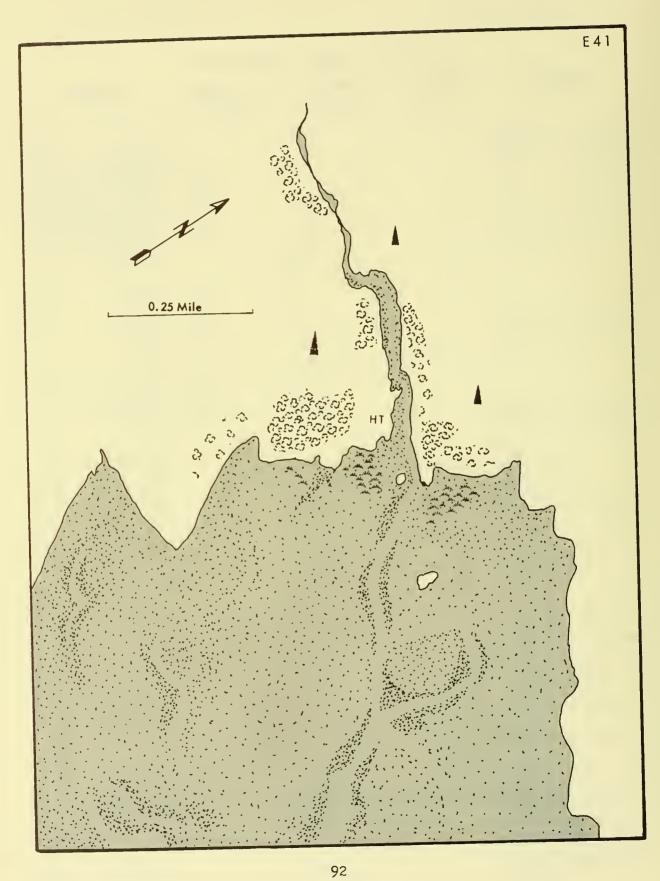
SPAWNING AREAS Good.

GENERAL NOTES When surveying by foot, stay along streambed as there are extensive beaver ponds along both sides of the stream back from the streambanks. The pinks enter as a middle run, but the major species, chum, enter late and continue along with coho into November. The stream has supported "fall fisheries" in the past. Extensively used for subsistence by Kake people.

					OTHER SPECIES	REMARKS
Miles	Ву	Live	Dead Live	Dead	Live	
0.5	FRI					Several thousand fish
	FWS					Some fish at mouth
0. S	FRI	200	100	)		Some fish at mouth
0.5	FRI	3,000	1,000	)	2 cohos	2,000 at mouth
0.5	FRI	103	20	)		
						Many pinks; stream dis- colored
A	ţKI.					Good showing
G 0.7	FWS	8,000	6,000	)		Bay full of chums
A 2.0 0.5	FWS FWS	8,000	:	Į.		< S00 fish in stream
	FWS	2, 800				Countless chums
<b>G</b> 0, 2	FWS		4	1		SO chums at mouth
						50 chums at mouth
	FWS		g	)		50 chums at mouth
G 0. 2	FWS		14	:		250 pinks and 30 chums at mouth
G 0. 2	FWS		17	7		500 pinks and 30 chums at mouth
G 0. 2	FWS		22	2		1,000 pinks and 30 chums mouth
G 0. 2	FWS		27	,		1,500 pinks and 30 chums at mouth
G 0. 2	FWS		29	)		2,000 pinks and 35 chums at mouth
G 0. 2	FWS		28	3		3,000 pinks and 35 chums at mouth
G 0. 2	FWS	1,000	25	5		3,000 pinks and 50 chums at mouth
G 0. 2	FWS	2,000	30	)		3, S00 pinks and 50 chums at mouth
G 0. 2	FWS	6,000	20	)		1,500 pinks and 50 chums at mouth
G 1.0	FWS	1,500	1,000	)		
G 0.7	FWS	600	1,000	)		
1.0	FWS	195	13	1		2,000 pinks at mouth
	FWS	3				1,500 pinks at mouth
0.5	FWS	5				
0.7	<b>F</b> WS	465	42	2		2,000 pinks and 1,000 chums at mouth
1.0	FWS	629	64	1		1,000 pinks and 1,000 chums at mouth
	Miles  0.5  0.5  0.5  0.5  A  A  G 0.7  A 2.0  0.5  G 0.2  G 0.7  1.0  0.5  0.7	0.5 FRI FWS 0.5 FRI 0.5 FRI 0.5 FRI 0.5 FRI A FRI A FRI A FRI G 0.7 FWS A 2.0 FWS 0.5 FWS FWS G 0.2 FWS FWS G 0.2 FWS G 0.2 FWS	Miles By Live  0.5 FRI FWS  0.5 FRI 200  0.5 FRI 3,000  0.5 FRI 103 A FRI A FRI G 0.7 FWS 8,000  A 2.0 FWS 0.5 FWS 8,000  FWS 2,800  G 0.2 FWS G 0	Miles By Live Dead Live  0.5 FRI FWS  0.5 FRI 200 100  0.5 FRI 3,000 1,000  0.5 FRI 103 20  A FRI  A FRI  G 0.7 FWS 8,000 6,000  A 2.0 FWS 0.5 FWS 8,000 50  FWS 2,800  C 0.2 FWS C 0.2 FW	Miles By Live Dead Live Dead  0.5 FRI FWS  0.5 FRI 200 100  0.5 FRI 3,000 1,000  0.5 FRI 103 20  A FRI A FRI G 0.7 FWS 8,000 6,000  A 2.0 FWS 0.5 FWS 8,000 1  FWS 2,800  G 0.2 FWS 9 G 0.2 FWS 9 G 0.2 FWS 9 G 0.2 FWS 14  G 0.2 FWS 22  G 0.2 FWS 22  G 0.2 FWS 22  G 0.2 FWS 25  G 0.2 FWS 26  G 0.2 FWS 27  G 0.2 FWS 27  G 0.2 FWS 28  G 0.2 FWS 29  G 0.2 FWS 1,000 25  G 0.2 FWS 1,500 30  G 0.7 FWS 600 1,000  1.0 FWS 1,500 1,000  1.0 FWS 195 13  FWS 3 0.5 FWS 5 0.7 FWS 465 42	Miles By Live Dead Live Dead Live  0.5 FRI FWS  0.5 FRI 200 100  0.5 FRI 3,000 1,000 2 cohos  0.5 FRI 103 20  A FRI A FRI G 0.7 FWS 8,000 6,000  A 2.0 FWS 0.5 FWS 8,000 1 FWS 2,800  C 0.2 FWS 9 G 0.2 FWS 9 G 0.2 FWS 14  G 0.2 FWS 17  G 0.2 FWS 22  G 0.2 FWS 29 G 0.2 FWS 25 G 0.2 FWS 25 G 0.2 FWS 25 G 0.2 FWS 27 G 0.2 FWS 29 G 0.2 FWS 1,000 25 G 0.2 FWS 1,000 25 G 0.2 FWS 6,000 30 G 0.2 FWS 6,000 30 G 0.2 FWS 6,000 30 G 0.2 FWS 6,000 1,000 1.0 FWS 1,500 1,000 1.0 FWS 19S 13 FWS 3 0.5 FWS 5 0.7 FWS 465 42

	SURVEYED		PINI		UM	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead Live	Dead	Live	
1956							
Sept 19	0.7	FWS					Many fish; water dark
Oct 12	0.5	FW5	1,500	4,500			5,000 chums at mouth
1957		TTMG	4 000				
Aug 17	A 2.0 G 0.2	FWS FWS	4,000 79	117			
Sept 12 Sept 12	A 1.5	FWS	800	175			10,000 in upper lake
Sept 23	G 0.7	FWS	65	800			ar, recommendation
Oct 10	G 1.0	FWS		8,000			5,000 dead
Oct 11	G 1.5	FWS		6,000			
1958	C 1 0	TTMC	7				
Aug 20 Aug 26	G 1.0 A 0.7	FWS FWS	7 200				
Sept 12	A lengt		20	400			
Sept 15	G 0. 7	FWS	25	350			6,000 chums in high tide
-							zone
Sept 29	G 2.0	FWS	140	5, 100		30 cohos	
1959	A 1 O	FWS	50	50			
Aug 8 Sept 23	A 1.0 up lake	FWS	50	7, 800			
Oct 9	G 0.5	FWS	70	5, 100			Many dead pinks and chums;
							500 salmon in salt water
196 <b>0</b>							
Aug 25	A mout						3,000 at mouth
Aug 26 Aug 29	A A	ADF ADF					No fish observed
Sept 12	A 0. 7	ADF		1, 200			2,000 fish at mouth
Sept 17	G 0. 2	ADF	100	100			3,000 off mouth in lake
Sept 22	A 0.5	ADF					300 chums in intertidal
Sept 26	A 0.7	ADF		2,000			1 000 : 1 1 500 :
Oct 1	G 1.0	ADF		600			1,000 in lake; 500 in intertidal zone
?	G lengt	h ADF		3,400			600 in lake
1961	O renge			2, 100			
Aug 20	A	ADF		1,500			Plus 10,000 in chuck
Aug 25	A lengt						1,500 in intertidal zone
Sep 8	A	ADF		3,000			2,500 mixed fish at mouth Mixed. Many dead
Sep 21 Sep 14	A 1.0 A 3.0	ADF ADF	500	200			8,000-10,000 in lagoon
Sep 28	A 1.5	ADF	000	200			6,000 mixed fish in stream;
•							1, 200 at mouth
Oct 1	G 1.5	ADF					5,000 mixed; 3,000 at
0 5	4.0.5	ADE					mouth
Oct 5 1962	A 0.5	ADF					1,500 chums in intertidal
July 31	A	ADF					No salmon observed
Sep 7	A 1.0	ADF	400				2,000 salmon in lagoon
<b>5</b> ep 18	A lengt			18,000			8,000 mixed
Sep 20	G	ADF					3,500-5,000 mixed in
Sep ?	A	ADF	3, 500	500			intertidal zone 4,000-5,000 at mouth;
Jep :	A	ADF	3, 300	300			7,000 in intertidal zone
Oct 11	A lengt	h ADF		8,000			Many dead; 250 in inter-
							tidal zone

Date	SUR VEYED Miles	Ву	PINK Live De	CHUM ad Live Dead	OTHER SPECIES Live	REMARKS
1963 Aug 28	A 0.5	ADF	some			2,000 in lagoon; 2,000 in intertidal zone
Sept 1	G IT	ADF	few	few		Good showing at mouth; 1,000 in intertidal zone; stream almost dry
Oct 2	G 0.5	ADF	200	1, 100		600 chums at mouth; 700 intertidal carcasses evidence of many more fish; peak past



E 41

EASTERN, FREDERICK SOUND, SECURITY BAY, 1.5 miles W. of lagoon, S. shore.

MAJOR SPECIES Pink. OTHER SPECIES Chum.
ESCAPEMENT TIMING Middle.
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE 2.8 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES Difficult above intertidal zone.

### INTERTIDAL ZONE

LENGTH 0.2 mile. AVERAGE WIDTH/DEPTH 201/611.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Clean gravel on riffles; clay in deepest holes.
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS Off mouth.

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 15'/3".

GRADIENT AND VELOCITIES Moderate.

BOTTOM Gravel; considerable algae on gravel on many riffles.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES

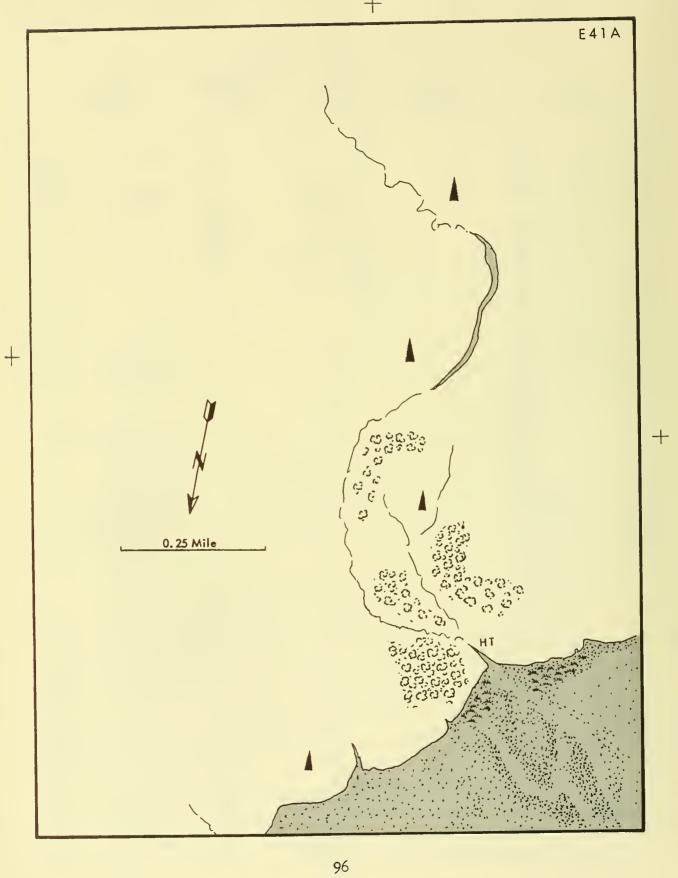
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Stream usually very low until fall rains. Fish lay off mouth.

	SURVEYED		PINI	ĸ	CHU	ΙМ	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead		Dead	Live	
Ducc	1411205	-,	21,0					
1941								
Sept 25	A 1.2	FWS	1,500		100			
1948			·					
Sept 28	A	FWS	1,000		1,000			
1949								
Sept 6	G 0. 2	FRI	300		62			
Sept 22	G 0. 2	FRI	2, 400		26\$			
Oct 1	G 0. 2	FRI	2,000		S00			
1953					70			
Sept 13	G 0.5	FWS	290		75			
1954	6	THATC	4 600					
Sept 28 1988	G	FWS	4,500					
Aug 8	G 0. 2	FWS			2			10 chums at mouth
Aug 11	G 0. 2	FWS			2			10 chums at mouth
Aug 12	G 0. 2	FWS			4			SO pinks, 1S chums at mouth
Aug 15	G 0. 2	FWS			6			S0 pinks, 13 chums at mouth
Aug 19	G 0. 2	FWS			6			500 pinks, 20 chums at
3								mouth
Aug 22	G 0. 2	FWS			7			1,500 pinks, 25 chums at
								mouth
Aug 24	G 0. 2	FWS			4			2,500 pinks, 30 chums at
								mouth
Aug 24	G 0. 2	FWS						3,000 pinks, 4 chums at mouth
A 26	G 0. 2	FWS			6			3,000 pinks, 30 chums at
Aug 26	G 0. 2	1 443			0			mouth
Aug 30	G 0. 2	FWS			9.			≫, S00 pinks, >30 chumsat
								mouth
Aug 31	G 0.2	FWS	370		7			>3,500 pinks, >30 chums at
3								mouth
Sept 3	G 0. 2	FWS	500		7			>3,500 pinks, \$30 chums at
								mouth
Sept 4	G 0. 2	FWS	3,000		13			>1, S00 pinks, >20 chums at
		T#110	2 000					mouth None observed at mouth
Sept 11	G 0.5	FWS	3,000		25			None at mouth
Oct 3	G 0. 2	FWS	2,000		25			None at mouth
1956	C 0 2	FRI						800 pinks at mouth
Aug 27 Aug 31	G 0. 2 G <b>0</b> . 2	FRI	36		54			2,000-3,000 pinks, 2 chums
Aug 31	G <b>0</b> . 2	1111	30		0.			at mouth
Sept 2	G 0. 2	FRI	44		66			200 pinks at mouth
Sept 4	G 0. 2	FRI						44 pinks at mouth
Sept 6	G 0. 2	FRI	245		30			1,500 pinks, 300 chums at
•								mouth
Sept 8	G 0. 2	FRI	60		* 8			1,000 pinks at mouth
Sept 10	G 0. 2	FRI	240		67			1,000 pinks at mouth
Sept 12	G 0. 2	FRI	828		104			2, S00 pinks, 100 chums at
								mouth
Sept 23	G 0. S	FRI	5,700		3,000			
Sept 25	G 1.0	FRI	2,000		1,500			

	\$UR VEYED		PINK		CHU	M	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
		•						
1956								
Oct 1 1957	G 0. 2	FRI	2,060		2, 120			
Sept 12	G 0.5	FWS	4		4			
Sept 23	G 0.5	FWS	15		650			
Oct 12 1958	G 0. 2	FWS						No fish observed
July 31	G 0 <b>. 0</b> 5	FWS			15			
Aug 1	G 0.05	FWS			20			
Aug 3	G 0. 1	FWS			16			
Aug 6	G 0.1	FWS			37			
Aug 9	G 0.2	FWS			25			
Aug 14	G 0.5	FWS			137			
Aug 18	G 0.5	FW5			5			
Aug 22 1959	G 0. 2	FWS			13			
Aug 7	G 1.0	FWS			26			
Aug 8 1960	A 0.5	FWS						No fish observed
Aug 29	A mouth	ADF						No fish observed
Sept 16 1961	G 0. 2	ADF	50					
Aug 20	A	ADF						500 at mouth; 1,500 in intertidal zone
Aug 25 1962	Α	ADF						500 at mouth
July 31	A mouth	ADF						No fish observed
Aug 10	A mouth							600 at mouth
Aug 13	A mouth							500=600 at mouth
1963								
Aug 28	A mouth	ADF						1,000 at mouth



E 41A

EASTERN, FREDERICK SOUND, SECURITY BAY, middle of W. shore.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

ESCAPEMENT TIMING Middle-late, Aug.

SPAWNING FACILITIES

STREAM TEMPERATURES No observed temperatures.

VALLEY DESCRIPTION Very tortuous course and overgrown with bushes.

DRAINAGE 4 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE Refer to #40.

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES The stream cannot be surveyed by air above the intertidal area due to its small size and heavy overstory.

### INTERTIDAL ZONE

LENGTH

AVERAGE WIDTH/DEPTH 15'/3".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Mossy gravel and silt.

LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS Primarily off stream mouth.

SPAWNING AREAS

GENERAL NOTES Stream is very narrow except for 150 yards of intertidal zone. It is very seldom wider than 8' and deeper than 2"-8".

### UPSTREAM

LENGTH ACCESSIBLE

AVERAGE WIDTH/DEPTH 5'/4".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Clean gravel and coarse sand.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES Stream has 2 small branches which meander through fairly dense small brush.

SCHOOLING AREAS

SPAWNING AREAS Good.

GENERAL NOTES The upper stream has good gravel but could not support many salmon.

Date   Miles   By   Live   Dead   Live   Dead   Live		SURVEYED	)	PIN	īK	CHU	JM	OTHER SPECIES	REMARKS
Sept 25	Date	Miles	Ву	Live	Dead	Live	Dead	Live	
Sept 25	1041								
1948   Sept 29		0.5	FRI	14,000	2	. 600			
1949				,	_	,			
Oct 1         1953         FRI         5,000         2,600           1955         Co. 2         FWS         100         40           1955         Aug 24         Go. 2         FWS         3,000           1956         FWS         3,000         27 chums at mouth           Aug 6         O. 5         FWS         6         100         50 chums at mouth           Aug 10         O. 5         FWS         6         100         50 chums at mouth           Aug 21         A         FWS         0         25           Aug 27         O. 2         FWS         0         25           Aug 31         O. 2         FWS         6         80         50,000-6,000 pinks and 10 chums at mouth           Sept 2         O. 2         FWS         19         38         75 pinks and 8 chums at mouth           Sept 4         FWS         19         38         75 pinks and 46 chums at mouth           Sept 3         O. 5         FWS         64         46         4,000-5,000 pinks and 1,000 chums at mouth           Sept 10         O. 5         FWS         400         140         3,000 pinks at mouth           Sept 12         O. 5         FWS         3,001	Sept 29		FRI	1,500					
1953   Sept 13									
Sept 13			FRI	5,000	2	, 600			
1955		60.0	EMC	100		40			
Aug 24         C 0.2         FWS         2,700         27 chums at mouth           Sept 11         G 0.5         FWS         3,000         1956           Aug 6         0.5         FWS         6         100         50 chums at mouth           Aug 10         0.5         FWS         6         100         50-70 chums at mouth           Aug 14         Aug 20         0.5         FWS         0         25           Aug 27         0.2         FWS         0         25           Aug 27         0.2         FWS         6         80         5,000-6,000 pinks and 50 chums at mouth           Aug 31         0.2         FWS         6         80         5,000-6,000 pinks and 10 chums at mouth           Sept 2         0.2         FWS         19         38         75 pinks and 8 chums at mouth           Sept 4         FWS         64         46         4,000-5,000 pinks and 10 chums at mouth           Sept 10         0.5         FWS         400         140         3,000 pinks at mouth           Sept 12         0.5         FWS         3,440         453         3,000 pinks at mouth           Sept 23         0.2         FWS         3,000         25 cohos		G 0. 2	L W 2	100		40			
Sept 1		G 0, 2	FWS	2,700					27 chums at mouth
1956	_								
Aug 10         0.5         FWS         6         100         50 chums at mouth           Aug 12         A         FWS         0         100         50-70 chums at mouth           Aug 20         0.5         FWS         0         25           Aug 27         0.2         FWS         0         25           Aug 31         0.2         FWS         6         80         5,000-6,000 pinks and 10 chums at mouth           Sept 2         0.2         FWS         19         38         75 pinks and 8 chums at mouth           Sept 4         FWS         19         38         75 pinks and 46 chums at mouth           Sept 8         0.5         FWS         64         46         4,000-5,000 pinks and 1,000 chums at mouth           Sept 10         0.5         FWS         400         140         3,000 pinks at mouth           Sept 11         0.5         FWS         3,440         453         3,000 pinks at mouth           Sept 12         0.5         FWS         3,031         401         2,000 pinks at mouth           Sept 12         0.5         FWS         3,031         401         2,000 pinks at mouth           Sept 12         0.5         FWS         3,031         401<	-								
Aug 12 A FWS 0 100 Aug 14 Aug 20 0.5 FWS 0 25 Aug 27 0.2 FWS 12 300-500 pinks and 50 chums at mouth  Aug 31 0.2 FWS 6 80 5,000-6,000 pinks and 10 chums at mouth  Sept 2 0.2 FWS 19 38 75 pinks and 8 chums at mouth  Sept 4 FWS 94 pinks and 46 chums at mouth  Sept 6 0.5 FWS 64 46 46 4,000-5,000 pinks and 11,000 chums at mouth  Sept 8 0.5 FWS 400 140 3,000 pinks and 10,000 chums at mouth  Sept 10 0.5 FWS 1,620 213 1,000 pinks at mouth  Sept 12 0.5 FWS 3,440 453 3,000 pinks at mouth  Sept 23 0.2 FWS 3,031 401 2,000 pinks at mouth  Sept 23 0.2 FWS 5,700 300  Oct 1 FWS 4,866 234  1957  Aug 17 A 2.0 FWS  Sept 12 G 0.2 FWS 35 39  Sept 12 G 0.2 FWS 5  Aug 13 G 0.2 FWS 5  Aug 13 G 0.2 FWS 119  Aug 15 G 0.2 FWS 119  Aug 15 G 0.2 FWS 119  Aug 19 G 0.2 FWS 13									
Aug 14 Aug 20									50 chums at mouth
Aug 20 0.5 FWS 0 25 Aug 27 0.2 FWS 12 300-500 pinks and 50 chums at mouth  Aug 31 0.2 FWS 6 80 5,000-6,000 pinks and 10 chums at mouth  Sept 2 0.2 FWS 19 38 75 pinks and 8 chums at mouth  Sept 4 FWS 94 pinks and 46 chums at mouth  Sept 6 0.5 FWS 64 46 46 4,000-5,000 pinks and 1,000 chums at mouth  Sept 8 0.5 FWS 400 140 3,000 pinks and 1,000 chums at mouth  Sept 10 0.5 FWS 1,620 213 1,000 pinks and 100 chums at mouth  Sept 12 0.5 FWS 3,440 453 3,000 pinks at mouth  Sept 15 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 23 0.2 FWS 5,700 300  Oct 1 FWS 4,866 234  1957  Aug 17 A 2.0 FWS 35 39  Sept 12 G 0.2 FWS 35 39  Sept 12 G 0.2 FWS 600  Cct 12 G 0.2 FWS 57  Aug 17 A 2.0 FWS 55  Aug 18 G 0.2 FWS 7  Aug 19 G 0.2 FWS 119  Aug 19 G 0.2 FWS 113  Aug 22 G 0.2 FWS 33		A	rws	U		100			5070 chums at mouth
Aug 27 0.2 FWS 6 80 5,000-6,000 pinks and 50 chums at mouth  Sept 2 0.2 FWS 19 38 75 pinks and 8 chums at mouth  Sept 4 FWS 94 pinks and 46 chums at mouth  Sept 6 0.5 FWS 64 46 46 4,000-5,000 pinks and 1,000 chums at mouth  Sept 8 0.5 FWS 400 140 3,000 pinks am unth  Sept 10 0.5 FWS 400 140 3,000 pinks at mouth  Sept 12 0.5 FWS 3,440 453 1,000 pinks at mouth  Sept 15 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 23 0.2 FWS 3,031 401 2,000 pinks at mouth  Sept 23 0.2 FWS 5,700 300  Oct 1 FWS 4,866 234  1957  Aug 17 A 2.0 FWS 35 39  Sept 12 G 0.2 FWS 35 39  Sept 12 G 0.2 FWS 600  Oct 12 G 0.2 FWS 600  Oct 13 G 0.2 FWS 74  Aug 15 G 0.2 FWS 119  Aug 16 G 0.2 FWS 119  Aug 17 G 0.2 FWS 119  Aug 18 G 0.2 FWS 119  Aug 19 G 0.2 FWS 119  Aug 19 G 0.2 FWS 119  Aug 19 G 0.2 FWS 113  Aug 22 G 0.2 FWS 133		0.5	FWS	0		25			30=70 chums at mouth
Aug 31 0.2 FWS 6 80 5,000-6,000 pinks and 10 chums at mouth  Sept 2 0.2 FWS 19 38 75 pinks and 8 chums at mouth  Sept 4 FWS 400 140 3,000 pinks and 10,000 chums at mouth  Sept 8 0.5 FWS 400 140 3,000 pinks at mouth  Sept 10 0.5 FWS 1,620 213 1,000 pinks at mouth  Sept 12 0.5 FWS 3,440 453 3,000 pinks at mouth  Sept 15 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 23 0.2 FWS 3,031 401 2,000 pinks at mouth  Sept 24 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 25 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 27 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 28 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 29 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 20 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 21 0.5 FWS 3,031 401 2,000 pinks at mouth  Sept 22 0.2 FWS 5,700 300  Oct 1 FWS 4,866 234 25 FWS 4,866 234 25 FWS 5 5 FWS 35 39 25 FWS 5 5 FWS 35 39 5 FWS 5 5 5 FWS				Ŭ					300-500 pinks and 50 chums
Chums at mouth   First   Sept   2   0. 2   FWS   19   38   75 pinks and 8 chums at mouth   FWS   94 pinks and 46 chums at mouth   94 pinks and 46 chums at mouth   95 pinks and 1,000 chums at mouth   1,000 chums at mouth   1,000 pinks and 1,000 pinks and 1,000 pinks and 1,000 pinks at mouth   1,000 pinks and 100 chums at mouth   1,000 pinks at m									
Sept 2         0.2         FWS         19         38         75 pinks and 8 chums at mouth           Sept 4         FWS         94 pinks and 46 chums at mouth         94 pinks and 46 chums at mouth           Sept 6         0.5         FWS         64         46         4,000-5,000 pinks and 1,000 chums at mouth           Sept 8         0.5         FWS         400         140         3,000 pinks at mouth           Sept 10         0.5         FWS         1,620         213         1,000 pinks and 100 chums at mouth           Sept 12         0.5         FWS         3,440         4\$3         3,000 pinks at mouth           Sept 12         0.5         FWS         3,031         401         2,000 pinks at mouth           Sept 23         0.2         FWS         5,700         300           Oct 1         FWS         4,866         234           1957         1958         25 fish           Sept 12         G 0.2         FWS         35           Sept 12         G 0.2         FWS         600           Oct 12         G 0.2         FWS         5           Aug 13         G 0.2         FWS         7           Aug 13         G 0.2         FWS         1	Aug 31	0. 2	FWS	6		80			5,000-6,000 pinks and 10
Sept 4									
Sept 4       FWS       94 pinks and 46 chums at mouth         Sept 6       0.5       FWS       64       46       4,000-5,000 pinks and 1,000 chums at mouth         Sept 8       0.5       FWS       400       140       3,000 pinks at mouth         Sept 10       0.5       FWS       1,620       213       1,000 pinks and 100 chums at mouth         Sept 12       0.5       FWS       3,440       4S3       3,000 pinks at mouth         Sept 13       0.5       FWS       3,031       401       2,000 pinks at mouth         Sept 23       0.2       FWS       3,700       300         Oct 1       FWS       4,866       234         1957       1957       25 fish         Aug 17       A 2.0       FWS       35       39         Sept 12       A 0.2       FWS       35       39         Sept 12       A 0.2       FWS       600       25 cohos         1958       7       4       4       4         Aug 13       G 0.2       FWS       7         Aug 15       G 0.2       FWS       13         Aug 22       G 0.2       FWS       33	Sept 2	0. 2	FWS	19		38			
Sept 6	C 4		TOTALC						
Sept 6       0.5       FWS       64       46       4,000-5,000 pinks and 1,000 chums at mouth         Sept 8       0.5       FWS       400       140       3,000 pinks at mouth         Sept 10       0.5       FWS       1,620       213       1,000 pinks and 100 chums at mouth         Sept 12       0.5       FWS       3,440       453       3,000 pinks at mouth         Sept 12       0.5       FWS       3,031       401       2,000 pinks at mouth         Sept 23       0.2       FWS       3,000       2,000 pinks at mouth         Sept 23       0.2       FWS       3,000 pinks at mouth         Sept 23       0.2       FWS       3,000 pinks at mouth         Sept 23       0.2       FWS       3,000 pinks at mouth         Sept 23       0.2       FWS       4,866       234         1957       1957       25 fish       25 fish         Sept 12       A 0.2       FWS       35       39         Sept 12       A 0.2       FWS       5         Aug 6       G 0.2       FWS       5         Aug 13       G 0.2       FWS       119         Aug 19       G 0.2       FWS       13	sept 4		r yy S						-
1,000 chums at mouth   3,000 pinks at mouth   3,000 pinks at mouth   3,000 pinks at mouth   1,000 pinks at mouth   3,000 pinks at mouth	Sept 6	0.5	FWS	64		46			
Sept 10       0. S       FWS       1,620       213       1,000 pinks and 100 chums at mouth         Sept 12       0. S       FWS       3,440       453       3,000 pinks at mouth         Sept 15       0. S       FWS       3,031       401       2,000 pinks at mouth         Sept 23       0. 2       FWS       5,700       300         Oct 1       FWS       4,866       234         1957       1957       25 fish         Sept 12       G 0. 2       FWS       35         Sept 12       G 0. 2       FWS       600         Oct 12       G 0. 2       FWS       25 cohos         1958       1958         Aug 6       G 0.0S       FWS       5         Aug 13       G 0. 2       FWS       7         Aug 15       G 0. 2       FWS       119         Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33									
at mouth         Sept 12       0.5       FWS       3,440       4S3       3,000 pinks at mouth         Sept 15       0.5       FWS       3,031       401       2,000 pinks at mouth         Sept 23       0.2       FWS       5,700       300         Oct 1       FWS       4,866       234         1957       1957       25 fish         Aug 17       A 2.0       FWS       35       39         Sept 12       G 0.2       FWS       600       600         Oct 12       G 0.2       FWS       600       25 cohos         1958         Aug 6       G 0.0S       FWS       5         Aug 13       G 0.2       FWS       7         Aug 15       G 0.2       FWS       119         Aug 19       G 0.2       FWS       13         Aug 22       G 0.2       FWS       33	Sept 8	0.5	FWS	400		140			
Sept 12       0.5       FWS       3,440       453       3,000 pinks at mouth         Sept 15       0.5       FWS       3,031       401       2,000 pinks at mouth         Sept 23       0.2       FWS       5,700       300         Oct 1       FWS       4,866       234         1957       1957       25 fish         Aug 17       A 2.0       FWS       35         Sept 12       G 0.2       FWS       600         Oct 12       G 0.2       FWS       600         Oct 12       G 0.2       FWS       5         Aug 13       G 0.2       FWS       7         Aug 15       G 0.2       FWS       119         Aug 19       G 0.2       FWS       13         Aug 22       G 0.2       FWS       33	Sept 10	0. S	FWS	1,620		213			
Sept 15       0.5       FWS       3,031       401       2,000 pinks at mouth         Sept 23       0.2       FWS       5,700       300         Oct 1       FWS       4,866       234         1957       1957       25 fish         Aug 17       A 2.0       FWS       25 fish         Sept 12       G 0.2       FWS       600         Oct 12       G 0.2       FWS       25 cohos         1958       25 cohos         Aug 6       G 0.0S       FWS       5         Aug 13       G 0.2       FWS       7         Aug 15       G 0.2       FWS       119         Aug 19       G 0.2       FWS       13         Aug 22       G 0.2       FWS       33	6 . 10	0.5	THUC	2 440		460			
Sept 23       0. 2       FWS       \$5,700       300         Oct 1       FWS       4,866       234         1957       1957       25 fish         Aug 17       A 2.0       FWS       25 fish         Sept 12       G 0.2       FWS       600         Oct 12       G 0.2       FWS       25 cohos         1958       1958       25 cohos         Aug 13       G 0.2       FWS       7         Aug 15       G 0.2       FWS       119         Aug 19       G 0.2       FWS       13         Aug 22       G 0.2       FWS       33									
Oct 1	-								2,000 pinks at modal
1957         Aug 17       A 2.0       FWS       25 fish         Sept 12       G 0.2       FWS       600         Oct 12       G 0.2       FWS       25 cohos         1958         Aug 6       G 0.0S       FWS       5         Aug 13       G 0.2       FWS       7         Aug 15       G 0.2       FWS       119         Aug 19       G 0.2       FWS       13         Aug 22       G 0.2       FWS       33		0.2							
Sept 12       G 0. 2       FWS       35       39         Sept 12       A 0. 2       FWS       600         Oct 12       G 0. 2       FWS       25 cohos         1958         Aug 6       G 0. 0S       FWS       5         Aug 13       G 0. 2       FWS       7         Aug 15       G 0. 2       FWS       119         Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33	1957			,					
Sept 12       A 0. 2       FWS       600         Oct 12       G 0. 2       FWS       25 cohos         1958         Aug 6       G 0. 0S       FWS       5         Aug 13       G 0. 2       FWS       7         Aug 15       G 0. 2       FWS       119         Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33	Aug 17								25 fish
Oct 12 G 0. 2 FWS 25 cohos  1958  Aug 6 G 0. 0S FWS 5  Aug 13 G 0. 2 FWS 7  Aug 15 G 0. 2 FWS 119  Aug 19 G 0. 2 FWS 13  Aug 22 G 0. 2 FWS 33				35					
1958 Aug 6 G 0. 0S FWS 5 Aug 13 G 0. 2 FWS 7 Aug 15 G 0. 2 FWS 119 Aug 19 G 0. 2 FWS 13 Aug 22 G 0. 2 FWS 33						600		25 1	
Aug 6       G 0. 0S       FWS       5         Aug 13       G 0. 2       FWS       7         Aug 1S       G 0. 2       FWS       119         Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33		G 0. 2	rw2					25 conos	
Aug 13       G 0. 2       FWS       7         Aug 15       G 0. 2       FWS       119         Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33		G.0.0S	FWS			5			
Aug 1S       G 0. 2       FWS       119         Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33									
Aug 19       G 0. 2       FWS       13         Aug 22       G 0. 2       FWS       33									
	Aug 19	G 0. 2	FWS			13			
Sept 15 G 0. 2 FWS 20 pinks in intertidal zone						33			
	Sept 15	G 0. 2	FWS						20 pinksin intertidal zone

SURVEYED			PINK		CHUM		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1959								
July 31	G 1.0	FWS			15			
Aug 7	G 1.0	FWS	10		55			
Aug 8	A 0.5	FWS	100					
Aug 12	G 1.0	FWS			50			
Sept 23	G 0.1	FWS	40					
1960								
]	No record							
1961								
Aug 20	A	ADF						2, 500 at mouth
Aug 25	A	ADF						1, 500 in intertidal zone
1962								,
July 31	A mouth	ADF						No fish observed
Aug 10	A mouth							Fish present at mouth
Aug 13	A mouth							Few at mouth
1963	A moud	LADI						1 CW de modell
	A mouth	ADE						400 at mouth
Aug 28	A moun	IADE						400 at mouth

EASTERN, FREDERICK SOUND, SECURITY BAY, 1 mile from mouth of bay on S. shore.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

AVERAGE WIDTH/DEPTH

ESCAPEMENT TIMING Middle-late, Aug.

SPAWNING FACILITIES Good.

STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 4 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES At high water it is difficult to survey because of the many windfalls and dense brush.

AERIAL SURVEY NOTES Poor stream to survey due to small size and overstory of brush.

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION

SCHOOLING AREAS Primarily off stream mouth.

SPAWNING AREAS

GENERAL NOTES This stream enters the bay through a fairly extensive tideflat and is the largest of the three streams on the W. shore.

#### UPSTREAM

LENGTH ACCESSIBLE 0.5 mile. AVERAGE WIDTH/DEPTH 20'/6".

GRADIENT AND VELOCITIES Moderate current.

BOTTOM Coarse gravel and small rocks.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES

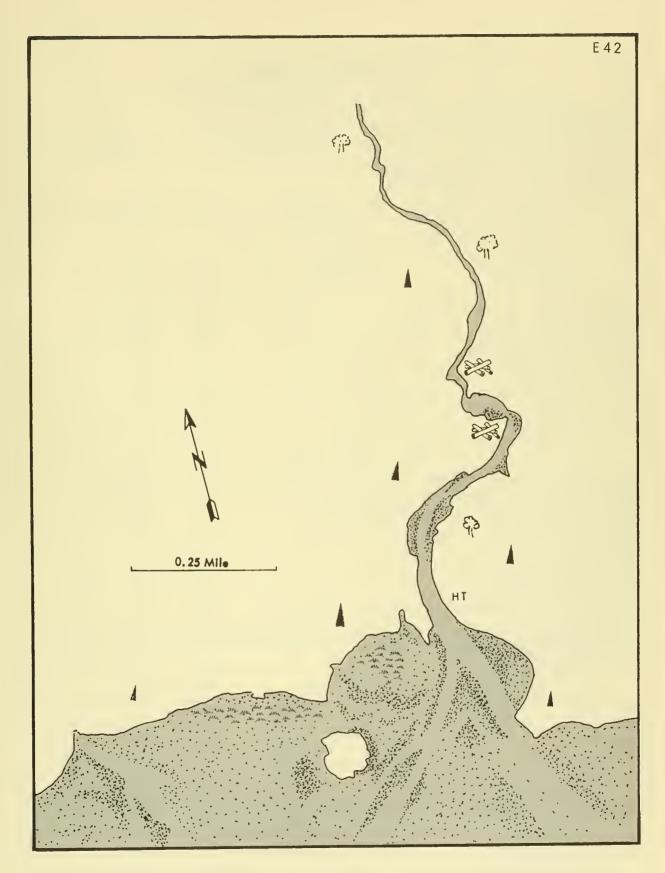
SCHOOLING AREAS

SPAWNING AREAS Good.

GENERAL NOTES

### ESCAPEMENT RECORD

	SURVEYED		PINK		CHUM	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live Dead	Live	
1941							
Sept 25 1943	0.5	FRI	31,700				
Sept 13 1948	0.7	FWS	5,000		20,000		
Sept 29		FWS	1,000				



56°41.6' N. 134°13.8' W.

EASTERN, CHATHAM STRAIT, ROWAN BAY, SE. shore opposite entrance to bay.

MAJOR SPECIES Pink.

OTHER SPECIES Chum, coho.

AVERAGE WIDTH/DEPTH

ESCAPEMENT TIMING

SPAWNING FACILITIES Fair.

STREAM TEMPERATURES Normal range. Observed temperature: 47.5° F., 9/1/50; S3° F., 9/20/51.

VALLEY DESCRIPTION

DRAINAGE 18.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES Easy stream to inspect if water is at normal height but would be very difficult at flood stage.

AERIAL SURVEY NOTES Difficult to survey due to brushy overstory.

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

### UPSTREAM

LENGTH ACCESSIBLE 2 miles. AVERAGE WIDTH/DEPTH 50'/12".
GRADIENT AND VELOCITIES Moderate to swift.
BOTTOM 60% exposed bedrock; 40% excellent gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

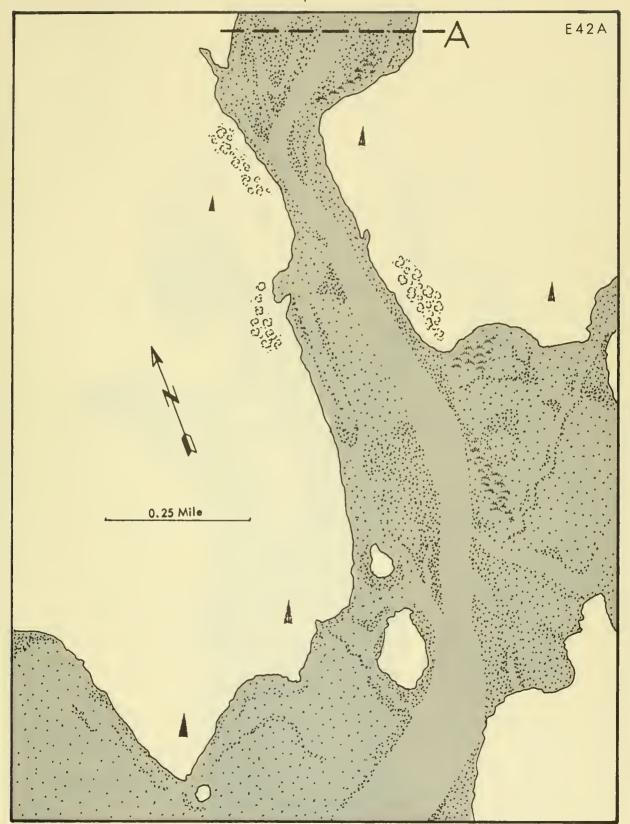
SPAWNING AREAS Fair.

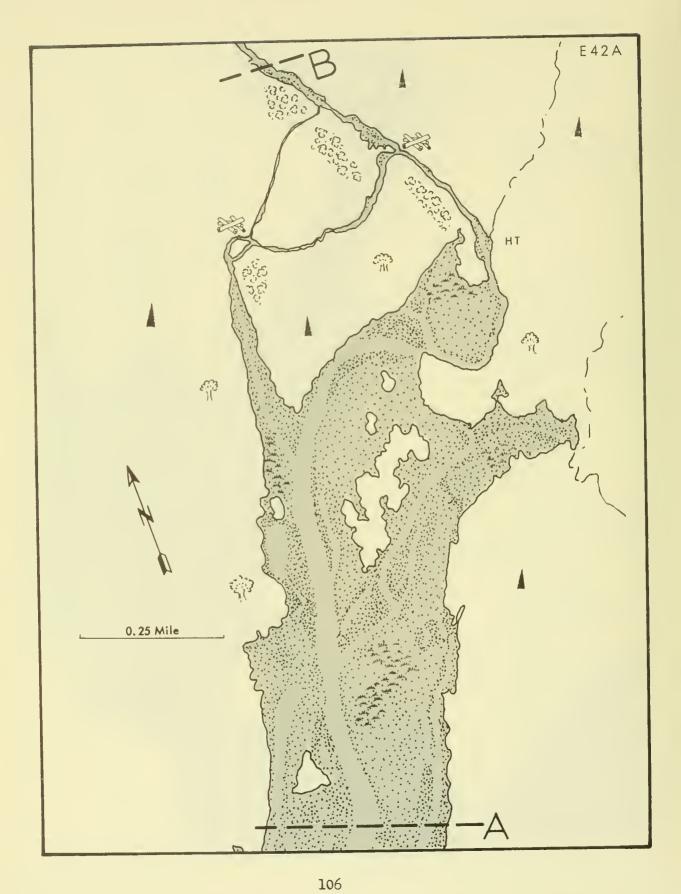
GENERAL NOTES Rowan Bay is good coho area although late surveys are lacking; all streams in bay receive coho escapement.

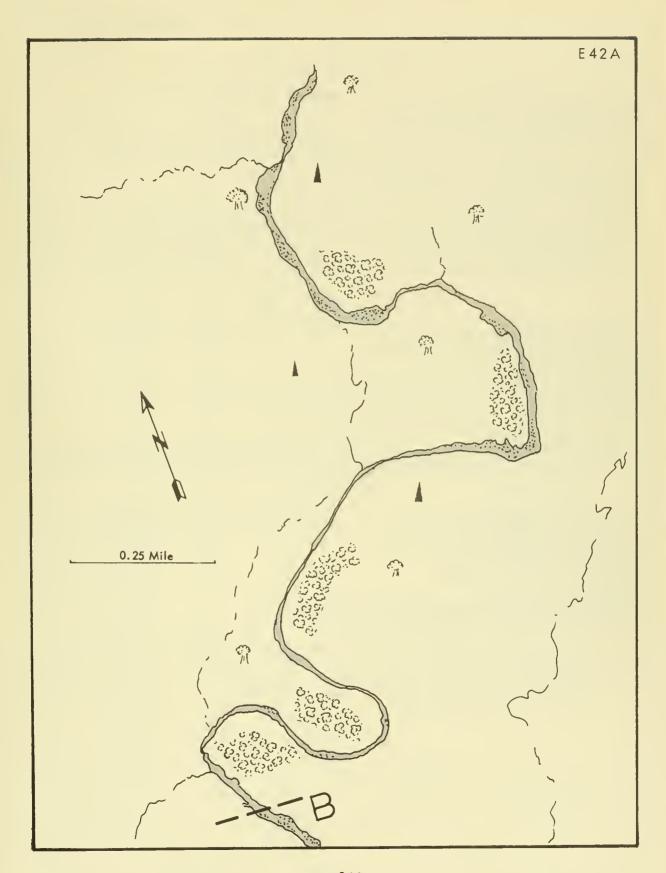
ESCAPEMENT RECORD

			, ,		,		, , .,	, , <u>,</u>
	SURVEYED	)	PIN	ľK	CHU	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live		Live	
1942								
Sept 27	2.0	FWS	150,000				30,000 cohos	
1943			,				,	
Sept 11	1.5	FWS	20,000		1,000			
Oct 16	1.0	FWS	,		500			
1949								
Sept 5	G 0.5	FRI	12, 350	0	4	0		Many jumps off mouth
Sept 19	G 1.0	FRI	11, 300		10			Weather made survey
			,			_		estimate difficult
1950								
Sept 1	0.5	FRI	258	0	3	0		
Sept 12	G 0.5	FRI	370		0			
Sept 18	G	FRI	427		71	0	10 cohos	Chums jumping in outer bay
Sept 19	G	FRI	7		, -	Ů	10 001103	oname jumping in outer out
1951	J		•					
Sept 10	G 0.5	FRI	3, 270	0	31	3		
Sept 20	G 0.5	FRI	4,750		100		55 cohos	
Oct 1	G 0.5	FRI	490		11			
1952	0.0	1111	150	210	11	32		
Sept 12	<b>G</b> 0.6	FRI	530					
Sept 12	G 0. 6	FRI	92		32	0	16 cohos	
19 <b>S</b> 3	3 0. 0	1111	24	3	52	· ·	10 001103	
Aug 5	A 4.0	FWS	400					
Aug 17	A 3.0	FWS	500		500			
Sept 9	G 0. 6	FRI	280		60			
Sept 14	G 1.5	FWS	230		11			
Sept 22	G 0. 6	FRI	280		50		820 cohos	
1954	G 0. 0	LIVI	200	40	30	-	020 001103	
Aug 24	marker	FRI	1,000					
Sept 9	marker	FRI	3,000					1,000 at mouth
Sept 17	marker	FRI	3,000					Chum in outer bay
Sept 17	G 1.0	FWS	2, 200		575		5 cohos	on the second stay
195S	3 1.0	1 11 3	2, 200		0,0		0 001100	
Aug 6	G 6.0	FWS						500 pinks at mouth
-	G 2. 0	FWS	1,450					5,000 pinks at mouth
Aug 26	G 5. 0	FWS	1, 300					5,000 pinks at mouth
Aug 26 Aug 26	A	FRI	>14,000					Jumps in bay
Sept 3	G 5. 0	FWS	10,000		2,000			Pinks present at mouth
		FRI	40,000		-,			Jumps in bay. Some present
Sept 5	A	LVI	40,000					at mouth
Sept 15	G 1.0	FWS	3,000					at mouth
Sept 13	G 2. S	FWS	3,000		2,000			
1956	G 2. 3	1 113			2,000			
Aug 11	G 1.0	FWS	2,530		0			25 pinks at mouth
Aug 16		FWS	30		Ŭ			25 pinks at mouth
Aug 10	G 1.0 G 1.0	FWS	30					2S pinks at mouth
		FWS	30					25 pinks at mouth
Aug 26	G 1.0							Lo pinas de moden
Aug 26	G 1.0	FRI	7,000 300					1,000 pinks at mouth
Aug 28	G 1.0	FWS FWS	300					A few pinks at mouth
Sept 1	G 1.0		2,500					1,000 pinks at mouth
Sept 4	G 1.0	FWS						10,000-20,000 pinks at mouth
Sept 7	G 1.0	FRI	7,000			103		10,000=20,000 pinks at mouth

S1	URVEYED	PINK	СНИМ	OTHER SPECIES	REMARKS
Date	Miles By	Live Dead	Live Dead	Live	
1956	G 1.5 FWS	1,600			2,000 pinks at mouth
Sept 10	G 1.5 FW:				3,000 pinks at mouth
Sept 12 Sept 16	G 2.0 FW		325		
1957	0 210 1	, ,			
Aug 14	G 1. 2 FW	s 50	500		
Aug 17	A 2.0 FW	s 3,500			
Aug 27	A mrkr FRI				
Sept 2	A mrkr FRI		245		
Sept 11	G 0. 2 FW		245		
Sept 12	A mrkr FRI		300		Thousands in bay
Sept 13	A length FW	2			21101130011101111
1958	A 1.S FW	c			No fish observed
Aug 26	A 1. S FW A length FW				Pinks and chums present
Sept 12 Sept 14	G 0. 2 FW				200 pinks, 50 chums, 30
Sept 14	00.2 1				cohos in tidal zone. All
					fresh
1959					No fish observed
Aug 11	A 1.0 FW				No fish observed
Oct 6	G 0.5 FW	3			
1960	A mouth AD	F			500 at mouth
Aug 26 Sept 22	A 0.5 AD				No fish observed
Oct 17	A mouth AD				No fish observed
1961	, , , , , , , , , , , , , , , , , , , ,				
Aug 1	A mouth AD	F			Many fish present in first
					pool above mouth  Few fish at mouth; pinks
Aug 2S	A O. S AD	)F			present
10.50					p. come
1962	A AD	)F			No fish observed
July 28 Aug 10	A AL				5,000 at mouth
Aug 10 Aug 29	A 1.0 AL				1,500 in intertidal zone;
Aug 25	A 1.0 12	•			12,000 mixed fish in
					stream
1963		10 000	few		700 mixed in intertial zone
Aug 10	G 1.5 AI	· ·	IEW		Poor visibility
Aug 19	A 0. 2 AI A 0. 5 AI				Many dead; 1,000 fish in
Aug 28	A 0. S AI				intertidal zone
Sept 2	skiff AI	OF			Coho jumping in bay;,
Jept 2	311111				1,500 fish in intertidal
					zone







56°40.6' N. 134°12.7' W.

EASTERN, CHATHAM STRAIT, ROWAN BAY, head of N. arm.

MAJOR SPECIES Pink. OTHER SPECIES Chum, coho.

ESCAPEMENT TIMING Middle, Aug.

SPAWNING FACILITIES

STREAM TEMPERATURES Cold range. Observed temperatures: 48° F., 9/5/49; 47.5° F., 9/1/50; 48° F., 9/10/51; 49° F., 9/20/51; 46° F., 10/1/51; 48° F., 9/12/52; 49° F., 9/26/52. VALLEY DESCRIPTION Wide, steep-sided, heavily wooded valley.

DRAINAGE 17.8 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Stream flows into the extreme head of bay.

ANCHORAGE Leave skiff at low tide. Anchorage is off mouth of the stream. Enter the bay with caution as there are many rocks and reefs. Once inside the bay, there are few dangers.

TRAILS AND SURVEY ROUTES Easy stream to inspect if the water is normal. Many gravel bars. AERIAL SURVEY NOTES Fair stream for aerial survey during normal and low water flows. Stream is best surveyed in late morning and early afternoon when the sun is high. Water extremely dark after rain.

#### INTERTIDAL ZONE

LENGTH 1.5 miles. AVERAGE WIDTH/DEPTH 100'/5". GRADIENT AND VELOCITIES Gentle. BOTTOM Varied but predominantly fine gravel. LOW TIDE LOCATION HIGH TIDE LOCATION Clearly defined grass flats. SCHOOLING AREAS Several large pools in the upper intertidal area.

SPAWNING AREAS Good spawning facilities at the upper end.

GENERAL NOTES Intertidal zone is a wide, shallow, continuous riffle with a large pool and deep area at the upper end. Four small tributaries enter the stream in the first three-eighths of a mile.

#### **UPSTREAM**

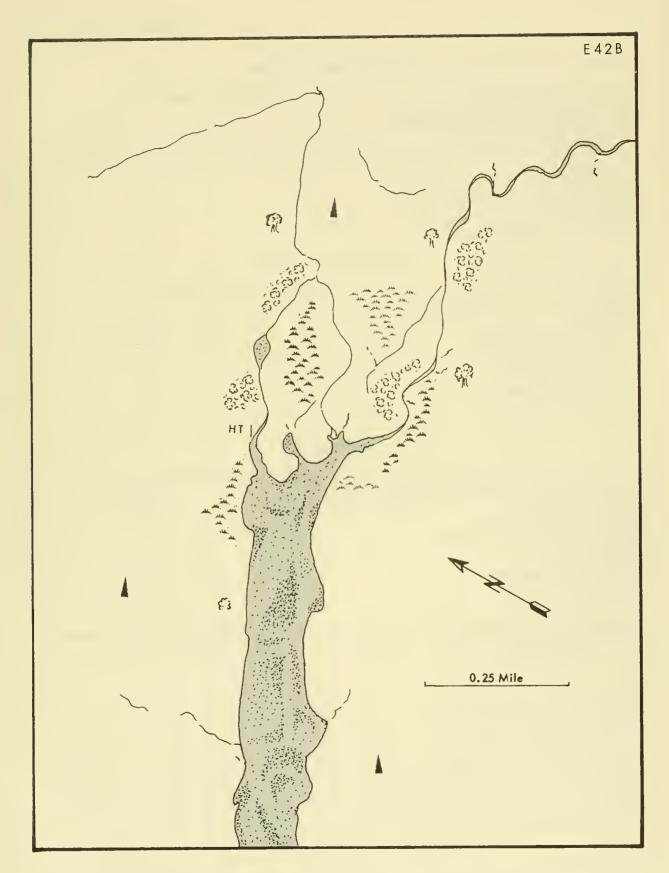
LENGTH ACCESSIBLE For length. AVERAGE WIDTH/DEPTH 701/20". GRADIENT AND VELOCITIES Gentle. BOTTOM Gravel, sand, and silt. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS None. TRIBUTARIES Several small tributaries are used by coho. SCHOOLING AREAS Pools throughout stream course.

SPAWNING AREAS Good spawning riffles and considerable deep areas and pools, after first 150 yards.

GENERAL NOTES Fish have been observed near extreme head of stream. Good open route to Security Bay for aerial survey; good shortcut.

	SURVEYE	)	PINI	K	CHUM	1	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
		·						
1942								
Sept 27	G 2.0	FWS	60,000		12,000		600 cohos	20,000 pinks at mouth
1951								, 1
Sept 1	A 3.0	FWS						300 fish seen, appeared to
_								be pink
Sept 10	G 0.5	FRI	3,000	0	30	3	3 cohos	Creek high but dropping
Sept 20	G 0.5	FRI	4,750	50	100	5	55 cohos	15% pinks spawning
Oct 1	G 0.5	FRI	500	250	11	32		Pink and chum spawning
1952								g
Sept 12	G 0.6	FRI	530	1	0	1		Many jumps in bay
Sept 26	G 0.6	FRI	92	3	32	0	16 cohos	y Jumpo m ouy
1953				_	-	_	-0 001100	
Sept 9	G 0.6	FRI	280	0	0	60		Many jumps in bay
Sept 22	G 0.6	FRI	230	40	50	4	820 cohos	Pink spawning
1954						•	020 001105	z ime spawning
Aug 24	G 0.6	FRI	1,000					Jumps in outer bay
Sept 1	A 3.0	FWS	300					300 pinks in estuary
Sept 9	G 0.6	FRI	3,000					1,000 at mouth. Few dead
- F	- •••		-,					pink
Sept 10		FRI	2,000					14,000 at mouth
Sept 17	G 0.6	FRI	3,000					Some dead pink; chum in
Top: I.	- 0.0		5,000					outer bay
1955								outer ouy
Aug 14	G 5.0	FWS	100					500 pinks at mouth
Aug 21	G 5.0	FWS	100					300 pinks at mouth
Aug 26	G 0.6	FWS	150					500 pinks at mouth
Aug 27	G 5.0	FWS	200					500 pinks at mouth
Sept 4	G 5.0	FWS	2, 400					400 pinks at mouth
Sept 15	G 1.5	FWS	3,000					are printed at means
Sept 29	G 0.5	FWS	200		400			
1956								
Aug 12	G 1.0	FWS	0		150			
Sept 4	G 1.0	FWS	2,000		550			400 pinks, 200 chums at
- CPV -			_,					mouth
Sept 22	G 1.0	FWS	22,000		3,000			
1957			,		,			
July 25	G 0. 2	FWS						No fish observed
Aug 1	G 0.2	FWS	20		200			
Aug 14	G 2.5	FWS	100		1,000		30 cohos	
1958					,			
Aug 13	G 1.0	FWS	750		100			
Aug 26	A 1. 2	FWS	100		20			
Sept 14	G 2.0	FWS	500		100		35 cohos	
1959								
Aug 11	A 1.0	FWS	150					
Aug 17	G 0. 2	FWS					200 cohos	No pinks or chums
Oct 6	G 0.5	FWS	1					

	SURVEYED	PINK	CHUM	OTHER SPECIES	REMARKS
Date	Miles By	Live Dead	Live Dead	Live	
1960					
Aug 25	A length ADF				No fish observed
Aug 26	A mouth ADF				200 at mouth
Sep 22	A length ADF				No fish observed
Oct 17	A 2.0 ADF				No fish observed
1961					
Aug 1	A 1.0 ADF				Many pinks present
Aug 25	A length ADF	10,000			
1962					
Jul 28	A 1.0 ADF	5,000	few		500 in intertidal zone
Aug 10	A 1.0 ADF				Pink present
Aug 13	A length ADF	>5,000			
Aug 29	A length ADF				1,000 in intertidal zone;
					impossible to survey
1963		** ***	4 500		Lung of mouth, fish in
Aug 10	G 2.5 ADF	21,800	4,500		Jumps at mouth; fish in intertidal zone
Aug 19	A 3.0 ADF	4,000			Poor visibility
Aug 28	A length ADF	dead fish			Peak past; 500 new fish at
9	J				mouth
Sept 2	skiff inter- ADF				Coho jumps in bay; a few
1	tidal zone				in intertidal zo.1e, and coho
					present at mouth



EASTERN, CHATHAM STRAIT, ROWAN BAY, stream E. of 42C.

MAJOR SPECIES Pink.

OTHER SPECIES Chum, coho.

AVERAGE WIDTH/DEPTH

ESCAPEMENT TIMING Middle, Aug.

SPAWNING FACILITIES Good.

STREAM TEMPERATURES

VALLEY DESCRIPTION Stream meanders through meadows for first mile from salt water; then into timber.

DRAINAGE

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

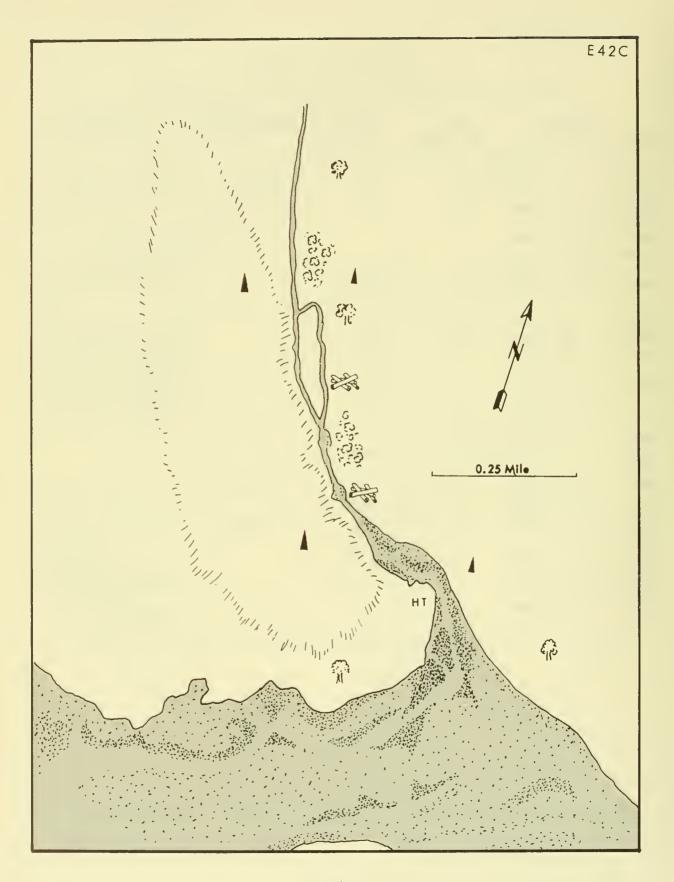
### UPSTREAM

LENGTH ACCESSIBLE 1.5 miles. A VERAGE WIDTH/DEPTH 81/10".
GRADIENT AND VELOCITIES Moderate current.
BOTTOM Gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Although not a large stream, this stream affords spawning areas to an important number of salmon.

SURVEYED		)	PIN	١K	CHU	JМ	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1942								
Sept 27	1.5	FWS	20,000		S,000		100 cohos	E 000 minutes at an autilia
1943	1.0	1 113	20,000		3,000		too cortos	5,000 pinks at mouth
Sept 12	1.5	FWS	10		100			
1951								
Sept 1 1954	G 1.5	FWS						1SO fish in stream
Sept 1	A 1.5	FWS						150 fish in stream; few in bay
Sept 17	G 0.5	FWS	6,000		600			Pinks not peaked; chum far past
1956								
Aug 11	0.5	FWS	0		130			
Aug 18	2. 0	FWS	200		200			50 chums at mouth
Aug 21	2.0	FWS	500		200			100 pinks and 500 chums at mouth
Aug 26	2. 0	FWS			200			500 pinks and 100 chums at mouth
Sept 5	2.0	FWS	1,000		200			100 pinks and 100 chums at mouth
Sept 11	1.0	FWS	2,000					
Sept 22 1987	0.5	FWS	1,000		4,000			
Aug 1	G 2.0	FWS			3			
Aug 14	G 1.5	FWS			50			
Sept 11	G 0.5	FWS	3		105			
Sept 26 1958	G 0. 2	FWS			700		20 cohos	
Sept 14 1959	G	FWS	8		18			
Aug 28 1960	A 2.0	FWS	25					200 salmon in salt water
Oct 17	A 1.0	ADF						No fish observed



56°41.5' N. 134°14.6' W.

EASTERN, CHATHAM STRAIT, ROWAN BAY, W. corner, W. arm.

MAJOR SPECIES Pink. ESCAPEMENT TIMING Middle, Aug. SPAWNING FACILITIES Excellent. STREAM TEMPERATURES VALLEY DESCRIPTION

DRAINAGE 2.5 square miles (polar planimeter). STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES Very difficult to inspect above 100 yards because of dense jungle along the sides of the stream and continuous network of falls.

AERIAL SURVEY NOTES A typical chum stream.

### INTERTIDAL ZONE

OTHER SPECIES Chum. coho.

AVERAGE WIDTH/DEPTH

LENGTH GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

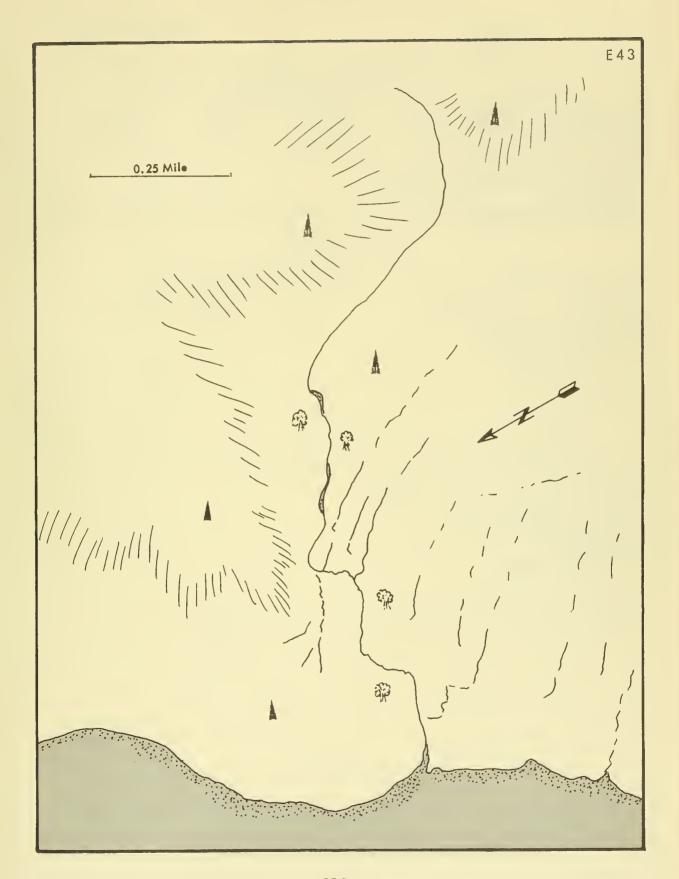
#### UPSTREAM

LENGTH ACCESSIBLE 1 mile. AVERAGE WIDTH/DEPTH 61/6". GRADIENT AND VELOCITIES Moderate to swift. BOTTOM Rubble. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS Excellent.

GENERAL NOTES A chum stream - small, minor producer.

	SURVEYED		PIN	٧K	СН	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1942								
Sept 27 1943	1.0	FWS	\$,000		\$,000			S,000 chums at mouth
Sept 12 1954	1.0	FWS						200 chums at mouth
Aug 3	G 0. 2	FWS			1,000			
Sept 17	G	FWS			500			200 chums and 100 pinks at mouth
19 <b>S</b> 6								modul
Aug 13		FWS	200					
Sept 6	0.2	FWS			15			100 chums at mouth
Sept 22	0.5	FWS	1,000		2,000			
1957								
Aug 1	G 0. 2	FWS	50		100			
Aug 14	G 1.5	FWS			200			
Aug 17	A 0.5	FWS						No fish observed
Sept 11	G 0. S	FWS	6		542			
Sept 26 1958	G 0.7	FWS			30,000		S00 cohos	
Sept 14	G	FWS	10		225			
Sept 21 19S9	G 2.0	FWS	200		120		100 cohos	
Aug 1 1960	A 0.S	FWS						No fish observed
Aug 26	A mouth	ADF						No fish observed
Sept 22	A lengtl	h ADF						No fish observed
Oct 17	A lengtl							No fish observed



ADF STAT. No.

56° 37.7' N. 134° 05.5' W.

E 43

EASTERN, CHATHAM STRAIT, BAY OF PILLARS, 0.5 mile from head, S. arm on E. side.

MAJOR SPECIES
ESCAPEMENT TIMING
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION

DRAINAGE 1.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

 ${\tt TRAILS\ AND\ SURVEY\ ROUTES\ Difficult\ to\ examine\ because\ of\ jungle-like\ growth\ and\ windfalls.}$ 

AERIAL SURVEY NOTES

### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

### UPSTREAM

LENGTH ACCESSIBLE 0.1 mile.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS Poor.

GENERAL NOTES Very small stream with minor value as spawning area.

REAM

AVERAGE WIDTH/DEPTH 3'/4".

AVERAGE WIDTH/DEPTH

OTHER SPECIES

118

	SUR VEYED		PIN	IK	CHU	M	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1042								
1942 Sept 28	0.1	FWS	200					1,000 pinks at mouth
1943								, A
Sept 11		FWS						No fish observed
1953					222			
Sept 14	G 0. 2	FWS			300			
19S4 Aug 24		FRI						3,000 at mouth
1956		1111						·, · · · · · · · · · · · · · · · · · ·
Sept 12	G 1.0	FWS	100					
Sept 25	G 1.0	FWS	1,500					
Oct 1	G 0.7	FWS	3, 400		2, 250			
1957								
June 25 - July 16	G 0. 2	FWS						No fish observed
Sept 11	G 0. 1	FWS						No fish observed
1958								
Aug 26	A length	FWS						No fish observed
Sept 14	G length	FWS						No fish observed
19 <b>S</b> 9 Aug 17	A 0.2	FWS						No fish observed
1960	n o. z	1 110						
	No record	d						
1961								
	No record	d						
1962	A 0.5	ADF						500 salmon at mouth
Aug 13 1963	A U. 3	ADI						500 Juliion at mount
Aug 19	A mouth	ADF						Overcast; poor visibility

ADF STAT. No.

S6°32.6' N. 134°10.8' W. PILEDRIVER CREEK

E 43B

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, PILEDRIVER COVE, Head, S miles E. of Pt. Ellis.

MAJOR SPECIES Pink. OTHER SPECIES ESCAPEMENT TIMING SPAWNING FACILITIES STREAM TEMPERATURES VALLEY DESCRIPTION DRAINAGE 6.4 square miles (polar planimeter). STREAM MOUTH IDENTIFICATION ANCHORAGE TRAILS AND SURVEY ROUTES AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE GRADIENT AND VELOCITIES BOTTOM MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

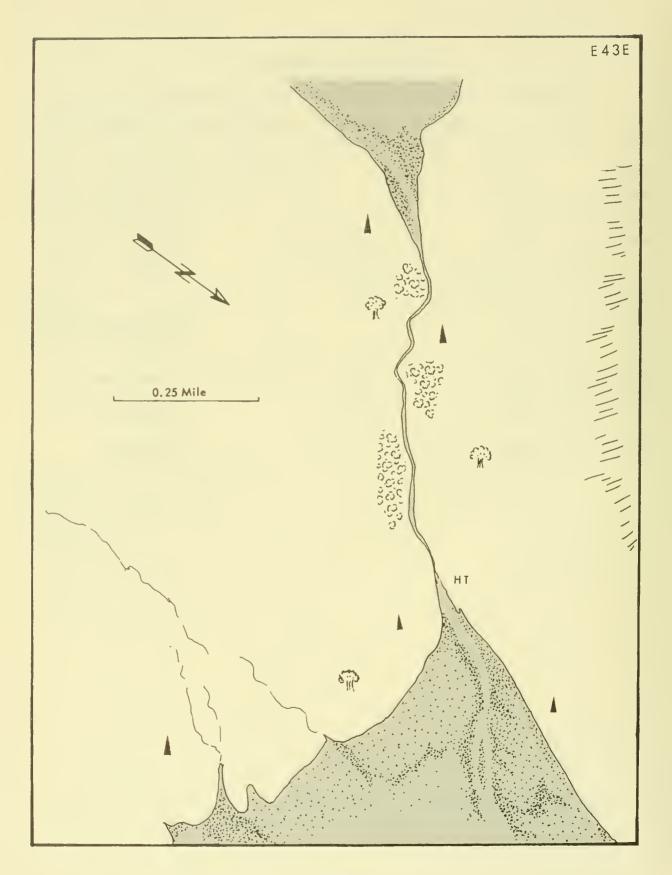
AVERAGE WIDTH/DEPTH 30'-50'/

AVERAGE WIDTH/DEPTH

### PILEDRIVER CREEK

### ESCAPEMENT RECORD

	SUR VEYED	)	P:	INK	СН	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1948								
Sept 5	0. 1	FWS	600					200 at mouth
1955								
Aug 16	G 0.2	FW5						No fish observed
1956								
Sept 4		FWS						324 pinks and 36 chums at
								mouth
Sept 16	0.7	FWS	220		30			25 pinks and 10 chums at
_								mouth
Sept 25	1.0	FWS	2,500		1,500			
1957								
Aug 17	A 1.0	FW5						400 at mouth, 350 salmon
								in stream
Sept 9	G 0. 2	FW5	123		10			
1958								
July 6	G 0. 2	FW5						No fish observed
Aug 26		FW5			20			
Sept 14		FW5	280		60			170 pinks and 4 chums in
								tidal zone
1959								
Aug 17	A 0.5	FWS						No fish observed



56°35.6' N. 134°07.2' W.

EASTERN, CHATHAM STRAIT, BAY OF PILLARS, W. head of S. arm.

MAJOR SPECIES Pink. OTHER SPECIES Chum, red, coho.

ESCAPEMENT TIMING Middle-late, Aug.

SPAWNING FACILITIES Good to excellent.

STREAM TEMPERATURES

VALLEY DESCRIPTION Wide, heavily wooded valley rising sharply away from the stream.

DRAINAGE 3.8 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Stream flows out through long grass flats in SW. corner of bay. ANCHORAGE At cannery site, use skiff to run to stream. Caution advised; salt water rapids into bay.

TRAILS AND SURVEY ROUTES This stream would be easy to inspect unless in flood stage, when it would be very difficult due to overhanging growth and lack of trails.

AERIAL SURVEY NOTES Best surveyed on right side when sun is fairly high in late morning or early afternoon. Good stream for aerial survey in periods of normal water flows. Becomes very dark after extensive rains.

### INTERTIDAL ZONE

LENGTH 0.2 mile. GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION Beginning of timber. SCHOOLING AREAS Off stream mouth.

AVERAGE WIDTH/DEPTH 75'/

SPAWNING AREAS Good.

GENERAL NOTES

### UPSTREAM

LENGTH ACCESSIBLE 1 mile to lake. AVERAGE WIDTH/DEPTH 50'/10". GRADIENT AND VELOCITIES Moderate to swift. BOTTOM Coarse gravel. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS None.

TRIBUTARIES None.

SCHOOLING AREAS Few holes throughout stream.

SPAWNING AREAS Riffles throughout stream.

GENERAL NOTES This stream could accommodate an important number of fish. Red run into lake is substantial and fairly large number of coho enter the bay in September.

Date	SUR VEYED Miles	Ву	PINK Live Dead	CHUM Live Dead	OTHER SPECIES Live	REMARKS
Date	1111105	2,	2210 2000	2110 2000	2110	
1942 Sept 28	0.7	FWS	50,000			
1949 Aug 1		FWS	7,000			
Aug 31 1950		FWS	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Full of pinks; reds present
Aug 31 19 <b>53</b>	A	FWS				Few
July 20	A	FWS				No fish observed; agent reported good red escape-ment
1954	٨	ETATO	1 500			
Sept 1 Sept 12 1955	A G 0.5	FWS FWS	1,500 1,050	1, 150		
July 10	G 1.0	FWS			SO reds	
July 17	G 1.0	FWS			150 reds 75 reds	
July 24 Sept 16	G 1.0 G 0.5	FWS FWS	500		75 reas	
Sept 16 1956	G 1.0	FWS	1,000	9,000		
Aug 13		FWS				No fish observed
Sept 4	G 0.3	FWS FWS	200			3,000 near mouth
Sept 12 Sept 25	G 1. 0	FWS	25,000	5,000		
Oct 1	G 0. 2	FWS	7, 300	2,350		375 pinks and S0 chums at mouth
1957 June 25		FWS				30 at mouth
July 16	G	FWS				200 reds in mouth
Aug 17	A 1.0	FWS				No fish observed
Sept 11 1988	A lake	FWS	SS	395	S reds	
July 7	G mouth				SO reds	
July 10-14		FWS FWS			2,000 reds 10 reds	
July 17-19 Aug 9	G 0.5	FWS			25 reds	
Aug 10-11					mo 1000	10-15 reds at mouth
Aug 17-18		FWS			7-21 reds	
Aug 26	A length					No fish observed
Sept 14 19 <b>5</b> 9	G length		35	240		
Aug 8 1960	A to lake		75			
June 25	A length				4 000 reds	No fish observed
Aug 29 Oct 2	A length G mouth				4,000 reds	No fish observed

	SUR VEYED		PIN	ſΚ	СН	UM	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1961								
Aug 1	A bay	ADF						Several jumps
Aug 25	A to lake	ADF	5,000				2,500 reds	
Sept 9	A length	ADF	7,000				1,700 reds	
1962								
Aug 13	A length	ADF					500 reds	
Aug 29 1963	A length	ADF	1,500				2,000 reds	2,000 in intertidal zone
Aug 19	A mouth	ADF						Overcast; no fish observed; no fish at mouth
Aug 28	Lake end outlet	ADF						56,000 at mouth; spawning area dry; outlet com- pletely dry for 200 yards

E 43F

EASTERN, CHATHAM STRAIT, BAY OF PILLARS, 0.2 mile E. of F.L.P. Reduction Plant.

MAIOR SPECIES Pink.

OTHER SPECIES Chum, coho.

ESCAPEMENT TIMING Late.

SPAWNING FACILITIES

STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 10.7 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES A pipeline extends along the right bank to the top of the cataracts.

There is a trail along the pipeline.

AERIAL SURVEY NOTES

### INTERTIDAL ZONE

AVERAGE WIDTH/DEPTH 35'/12". LENGTH GRADIENT AND VELOCITIES Gentle. BOTTOM Large broken rock and boulders.

LOW TIDE LOCATION

HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

### UPSTREAM

LENGTH ACCESSIBLE

AVERAGE WIDTH/DEPTH 25'/5".

GRADIENT AND VELOCITIES Gentle to swift.

BOTTOM Considerable variation from bedrock to sand and silt.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS There is a 300 yard cataract area above the quarter mile mark above the mouth. Beyond the cataract area, there is a split.

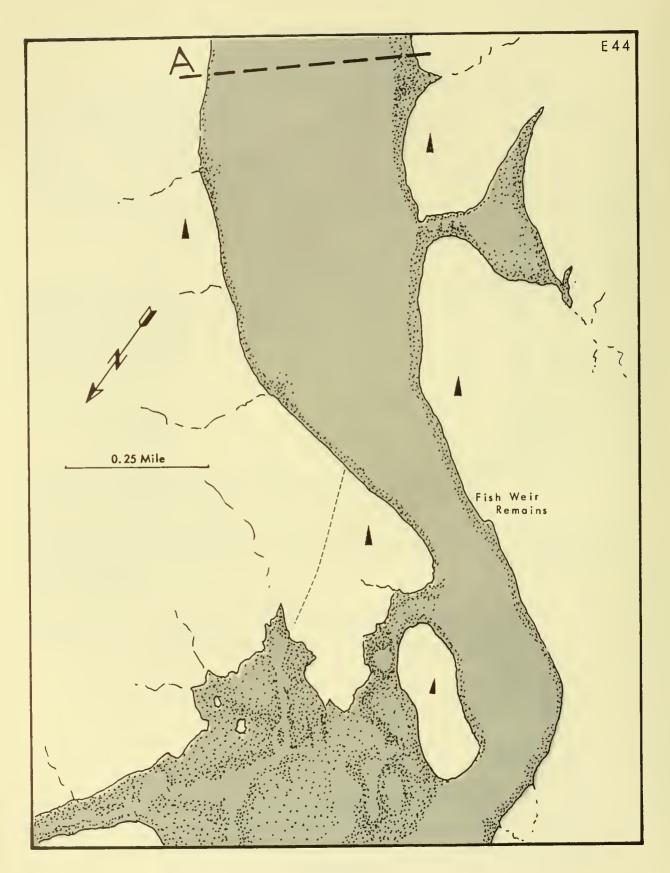
TRIBUTARIES

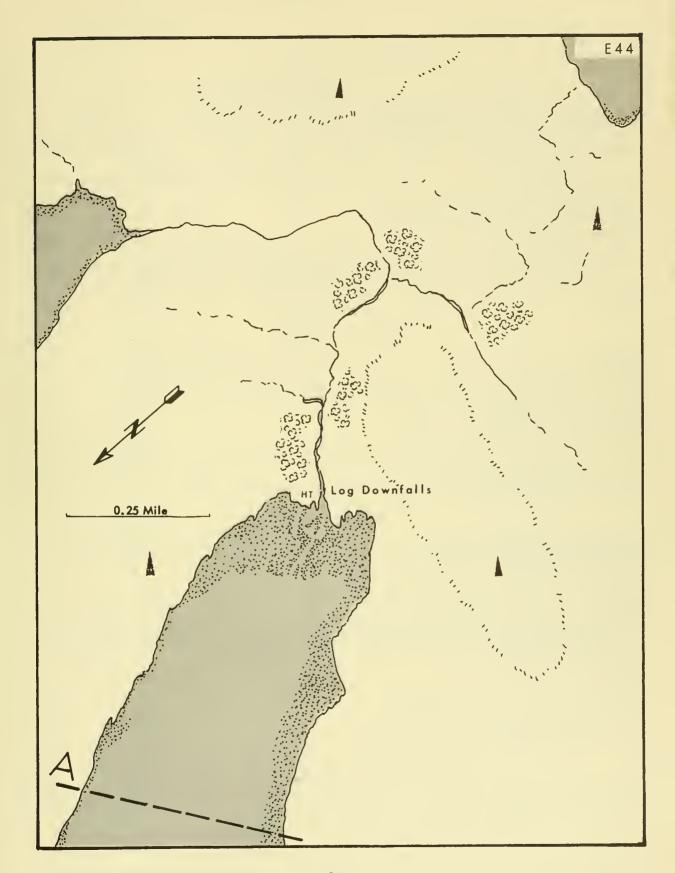
SCHOOLING AREAS

SPAWNING AREAS Excellent spawning gravel begins just above the split.

GENERAL NOTES Substantial coho producer. Coho school near reduction plant.

	SURVEYED	)	PINI		СНИ	M	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1949								
Sept S 1953	G 0.6	FRI	300					
Sept 14 1955	G <b>0.</b> 5	FWS			400			
Aug 26	G 1.0	FWS	19					
Sept 29 1956	G 0.5	FWS	9,000					
Sept 12 1957	G 1.0	FWS	4,000		20			1,000 pinks at mouth
Aug 17	G 1.0	FWS						No salmon observed
Sept 11	G 0.7	FWS	134		14			
1958								
Aug 26		FWS						No salmon observed
Sept 14 1959	G to falls	FWS	300		25			
Aug 28 1960	A 0.7	FWS	200					
Aug 25	A mout	h ADF						2 jumps
Oct 2		h ADF						No salmon observed
1961								
Sept 9	A mout	h ADF						500 cohos in intertidal zone





E 44

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, ELENA BAY, E. head.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

ESCAPEMENT TIMING Late. Aug. - Sept.

SPAWNING FACILITIES The streambed is composed of good spawning gravel, clean and mediumsized, for the first half mile above tidewater.

STREAM TEMPERATURES Cold range. Observed temperatures: 42° F., 9/4/49; 43.5° F., 9/2/50; 44° F., 9/17/50.

VALLEY DESCRIPTION This stream issues from a narrow mountain valley which appears to be quite steep further upstream.

DRAINAGE 7.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE The best approach is from the left side of the mouth and the stream is then shallow enough for wading.

TRAILS AND SURVEY ROUTES Difficult travel in upper stream. The stream is branched out all over the valley and is so filled with holes and overgrown banks that it cannot be followed.

AERIAL SURVEY NOTES Difficult above intertidal due to brush.

#### INTERTIDAL ZONE

LENGTH

AVERAGE WIDTH/DEPTH 125'/8".

GRADIENT AND VELOCITIES Fast water.

BOTTOM Large rock and algae. An average of 110 feet of good gravel first one-third mile.

LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS Off stream mouth.

SPAWNING AREAS There is a wide and excellent spawning area for the first one-eighth mile above the cataract at the mouth.

GENERAL NOTES This is a medium-sized stream with a cataract at the mouth.

### UPSTREAM

LENGTH ACCESSIBLE 2.5 miles.

AVERAGE WIDTH/DEPTH 75'/6"-10".

GRADIENT AND VELOCITIES Gentle.

BOTTOM Clean broken rock and gravel.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS There have been recent reports of partial blocks by beaver dams on this stream.

TRIBUTARIES There are 2 feeder streams entering the main stream on the right side in the upstream area. These branches extend 2.5 miles back into the brushy valley.

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

Date	SURVEYED Miles	Ву	PIN Live	IK Dead	CHI Live	JM Dead	OTHER SPECIES Live	REMARKS
1940								
Sept 17 1942	2.5	FWS	33,950		14,550			1,000 at mouth
Season 1943		FWS	100,000		40,000			Seeding excellent
Sept 10 1944	0.2	FWS	100					Seeding failure
Sept 19 1945	0.2	FWS	1,500		1,500			
Sept 27 1946	0.4	FWS	500		25,000			
Sept 29 1948	0.5	FWS			10,000			
Oct 1 1949		FWS	20,000		S,000			2,000 at mouth
Sept 4	G 0. 2	FRI			1			
Sept 22 1950		FWS						Stream 80% full
Aug 20	A	FWS	50					Seeding poor
Sept 2	G 0. 6	FRI	3		4			
Sept 8	0.7	FWS	67		3			107 at mouth
Sept 17 Sept 21	G 0.5 G 0.2	FRI FRI	67 30		69 850			1,000 off mouth
19 <b>5</b> 1	0.2	FIXE	30		050			1,000 oii moddi
Aug 26 19 <b>5</b> 2	0.5	FWS						No fish observed
Aug 25	A 0.7	FWS FWS						About 300 fish in stream Few chums in stream and
Sept 16		r vv S						off mouth
1953								
Sept 15 1954	A 0.5	FWS	42		20			
Sept 14	G 0.5	FWS	11		15			
1955	C 0 2	ENATO						No fish absorped High
Sept 4	G 0.2	FWS						No fish observed. High water
Oct 1 1956	G 0.7	FWS	5		750			
Aug 20		FWS					180 cohos	
Aug 21		FWS					500 cohos	2 1 200 -1
Sept 6		FWS						2 pinks and 200 chums at mouth
Sept 12	G 0.1	FWS	100					
Sept 15	0.7	FWS	5,000		100			
Sept 2S	1.0	FWS	2,500		4 100			60 pinks and 850 chums at
Sept 30	G 0.5	FWS	3, 300		4, 100			mouth

SURVEYED		PIN	PINK CHUM			OTHER SPECIES	REMARKS	
Date	Miles	By	Live	Dead	Live	Dead	Live	
1987								
July 8	G	FWS						No fish obsérved
Aug 27	G	FWS						No fish observed
Sept 9	G 0.5	FWS	58		8			THE TIME COSET VEG
1958					_			
June 27 -								
July 1	G 0.5	FWS						No fish observed
<b>A</b> ug 17	G 0. 2	FWS						No fish observed
Sept 13	G 0.5	FWS						No fish observed in
								intertidal zone
1959		F25.1.5.00						
Aug 28	A 1.0	FWS						No fish observed
1960	No reco							
1961	No reco	ra						
Aug 20	A mouth	ADF						1 000 at mouth 500 in
rrug 20	71 moun	1 1 1 1 1						1,000 at mouth, 500 in intertidal zone
Sept 13	G 0. 2	ADF	100		2S			Intertidur zone
1962								
July 28	A	ADF						No fish observed in inter-
•								tidal zone
Aug 13	A	ADF						500 at mouth
Aug 29	A	ADF						No fish observed in inter-
10.63								tidal zone
1963	Λ	ADE						
Aug 19 Aug 28	A mouth	ADF						Overcast; no fish at mouth
Aug 20	A 0. 0	AUI						No fish observed in stream;
Sept 5	G 0.2	ADF	30					5,000 at mouth Stream high; visibility
			00					good; fish in lower part
								of stream

U.S. Fish & Wildlife Service Weir Counts

Date	Pink	Chum	Coho	Red	King	Stream gage	Water temp.	Remarks
1948								
Sept 2	18	10						
Sept 3-8	3							Weir destroyed
Sept 15	200	25						
Sept 16	100							
Sept 17	350	30						
Sept 18	150	20						
Sept 19-2	21							Flooding
Sept 22	1 <b>75</b>							
Sept 23	350							
Sept 24	250	150						
Sept 25	200	350						
Sept 26	150	400						
Sept 27	100	400						
Sept 28	100	550						
Sept 29	75	650						
Sept 30		800						
Oct 1								Watchman removed
Totals	2, 218	3,385						

\$6°32.3' N. 134°06.0' W.

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, ELENA BAY, 1 mile from head on W. side of bay.

MAJOR SPECIES Pink. OTHER SPECIES ESCAPEMENT TIMING Middle-late.
SPAWNING FACILITIES Limited spawning area.
STREAM TEMPERATURES
VALLEY DESCRIPTION Very brushy valley.
DRAINAGE 4.6 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES Moderate.

BOTTOM Clean small gravel and shell.
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES The intertidal zone would provide the greatest spawning area of this stream.

#### UPSTREAM

AVERAGE WIDTH/DEPTH 51/3".

LENGTH ACCESSIBLE 1.5 miles.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Fine gravel and coarse rubble.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS

TRIBUTARIES The stream forks one-eighth mile above the mouth and these forks turn into turbulent little courses and extend back into the brush 1.5 miles.

SCHOOLING AREAS

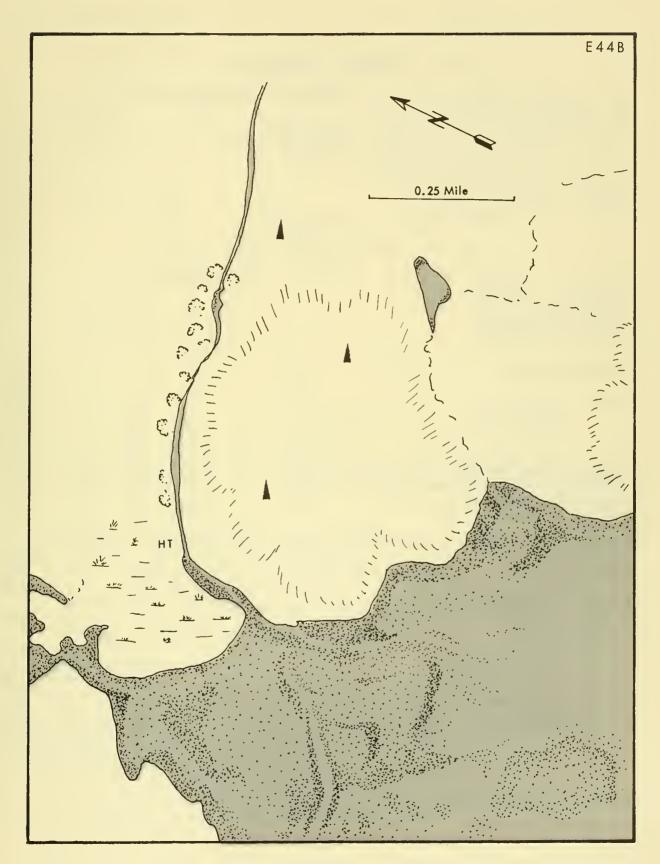
SPAWNING AREAS Limited.

GENERAL NOTES

		, ,		,		, ,	, , ,	
	SURVEYED	1	PIN	K	CHU	JΜ	OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1940								
Sept 17	1.5	FWS	15,000					5,000 at mouth
1942	0.5	TT 1.0	6 000					
Sept 21	0.5	FWS	5,000					
1943	1.0	ESAZC						2 200
Sept 11 1944	1.0	FWS						2,000 at mouth
Sept 10	0.2	FWS	150					
1945	0.2	1 440	150					
Sept 27		FWS						S, 000 at mouth
1948								o, ooo at mouth
Oct 1		FWS	5,000					
1949			,					
Aug 31		FWS	500					
1950								
Aug 30	A	FWS						No fish observed
Sept 2	0.5	FRI	2,056		4			
Sept 17	0.5	FRI	3,852	129	54	10		
Sept 21	0.5	FRI	2,976	24	3	18		
1951								
1.000	No record							
1952	NT							
1953	No record							
Sept 15	G 0. 2	FWS	7					
1954	30.2	1 11 3	′					
Sept 14	G 0.2	FWS	748		153			
1955								
Aug 22	G 0.7	FWS						15 pinks at mouth
Sept 9	G 0.7	FWS	20,000					*
1956								
Sept 16	1.0	FWS	320		40			700 pinks, 100 chums at mouth
1957								
July 8	G	FWS						No fish observed
Aug 17	A 0.5	FWS						No fish observed
Aug 27	G	FWS						No fish observed
1958	C 0 3	ETALC						No fish observed
Aug 11	G 0, 2	FWS FWS						No fish observed
Sept 13 1959	G 0. 2	F VV S						No 11sti observed
1939	No record							
1960	110 Tecord							
1000	No record							
1961								
Sept 9	Α	ADF						2,500 at mouth, 800 in
•								intertidal zone
1962								
July 28	A	ADF						No fish observed
Aug 29	Α	ADF						1,500 at mouth

ADF STAT. No. E 44A

Date	SURVEYED Miles	Ву	PIN Live	NK Dead	CHI Live	JM Dead	OTHER SPECIES Live	REMARKS
1963		405						2 FOO at mouth, oversage
Aug 19	A mouth	ADF						2,500 at mouth; overcast
Aug 28	A 0.8	ADF						No fish observed
Sept 5	G 0.9	ADF	100		25			



56°26.4' N. 134°02.7' W.

E 44B

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, E. PETROF BAY, E. of middle of long island.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

AVERAGE WIDTH/DEPTH

ESCAPEMENT TIMING Late.
SPAWNING FACILITIES Fair.

STREAM TEMPERATURES

VALLEY DESCRIPTION The stream flows through a narrow gorge.

DRAINAGE 4.3 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE Off Alecks Creek.

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Difficult to survey because of brush.

### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

### UPSTREAM

LENGTH ACCESSIBLE 0.5 mile.

AVERAGE WIDTH/DEPTH 30'/

GRADIENT AND VELOCITIES Steep; current swift.

BOTTOM Coarse gravel and rubble with deep pools and small gravelly areas at infrequent intervals.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

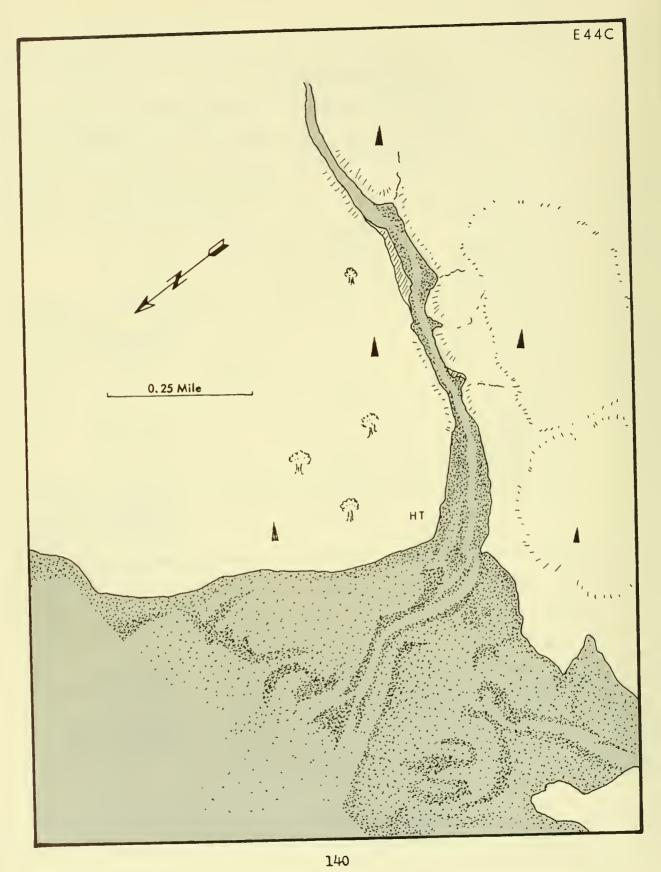
TRIBUTARIES The stream receives a tributary brook from the eastern slope which also originates in a small lake.

SCHOOLING AREAS

SPAWNING AREAS Fair.

GENERAL NOTES

Date	SUR VEYED Miles	Ву	PIN Live	CHUM Live Dead	OTHER SPECIES	REMARKS
		,				
1940 Sept 18 1946	0.5	FRI	5,000			
Sept 30 1948	0.5	FRI	50,000			
Sept 15		FRI	4,000	1,000		
Oct 1 1949		FRI	35,000			Some chum
Aug 31 Sept 23 19S0		FRI FRI	30,000			80% filled
Ang 30	Α	FRI				No fish observed
Sept 8 1953	3.5	FRI	6, S <b>0</b> 0	2		
Sept 15 1954	G 0.5	FWS	17	175	3 cohos	
Sept 15 1955	G 0.1	FWS	25	500		
July 9	0.1	FWS				No fish observed
Aug 22	0.1	FWS	1 100	95		No fish observed
Oct 1 1956	0.5	FWS	1, 1SO	25		
Sept 13	0.5	FWS	2, 400	1,400		1,500 pinks and 350 chums at mouth
Sept 30	0.2	FWS	1,900	1,650		800 pinks and 500 chums at mouth
1957		77410	0	457		750/
Sept 10 1988	G 0. 2	FWS	9	457		75% spawning
Sept 13	G 0. S	FWS		8		
1959	No report					
1960	No report					
	No report					
1961	٨	ADF				700-800 at mouth
Aug 20 Aug 25 1962	A A length	ADF				Spawning to beaver dam
July 28	Α	ADF				200 salmon at mouth
Aug 8	Α	ADF				300 salmon at mouth
Aug 13 1963	A 0.5	ADF	present			1,000 salmon at mouth
Sept S	G 0.5	ADF		500		



AVERAGE WIDTH/DEPTH 100'/18"-3.5'.

56°28.5' N. 134°01.8' W.

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, ELENA BAY, E. head of S. arm.

MAJOR SPECIES Pink. OTHER SPECIES Chum, coho. ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES Excellent. STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 3.7 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 3.7 miles. AVERAGE WIDTH/DEPTH 1001/1811.

GRADIENT AND VELOCITIES Moderate. Gradual.

BOTTOM Fine sandy gravel; medium rubble.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES The stream has a number of small tributaries and 1 large tributary about 1 mile upstream which drains a large lake on the E. slope.

SCHOOLING AREAS

SPAWNING AREAS Excellent.

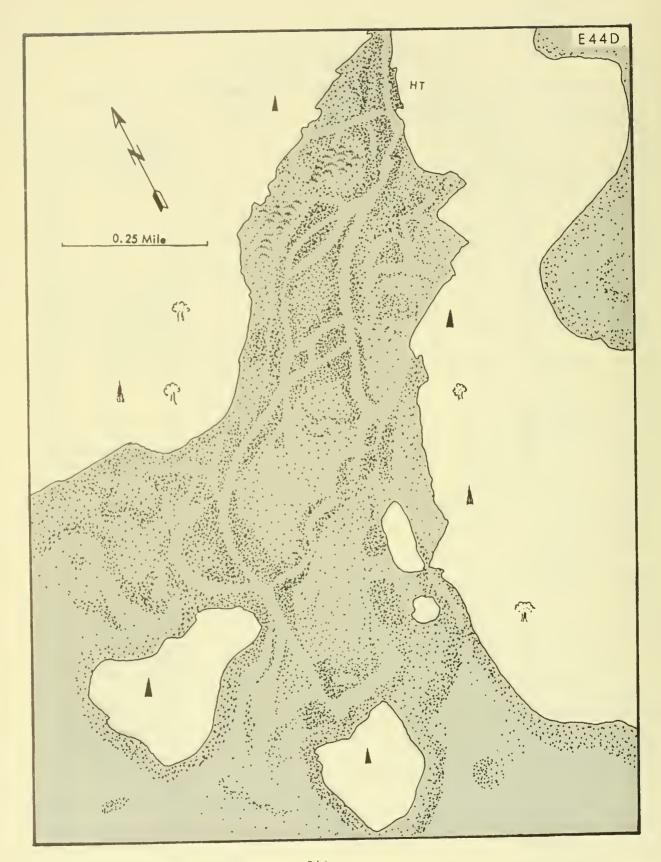
GENERAL NOTES This is a large stream carrying a large flow of water. It is suggested that escapement data for stream 44C and stream 44D may be intermingled due to some uncertainty in the stream numbers on this data.

ESCAPEMENT RECORD

	SUR VEYED		PINK		СНИ		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1940			50.000					
Sept 18 1942	2, 2	FRI	50,000					Some chum
Sept 21 1944	1.0	FRI	30,000					
5ept 20 1948	0.6	FRI	42,000		3,000			
Sept 15	0.5	FRI	15,000					
Oct 1 1949		FRI	9,000		5,000			2 000 off
Sept 4	G 0. 2	FRI	5,000	100	70	1.40		3,000 off mouth
Sept 20 1950	G	FWS	6,500	180	79	140		
Sept 2	G 0.5 G 0.5	FRI FRI	2,056 3,852	129	4 54	10	6 cohos	
Sept 17 Sept 21 1951	G 0.5	FRI	2,976	24	3	18	o conos	
5ept 10	A 0.5	FRI	6,600	65	16	0		20% spawning
Sept 20	A 0.5	FRI	13,300	255	47	15		12% spawning
Oct 1 1952	A 0.5	FRI	4,600	1,000	90	100		75% pinks spawning
Sept 12	A 0.5	FRI	5,420	11	1	0		Stream flooding
Sept 27 1953	A 0.5	FRI	770	2, 230	0	0		Pink run over
Sept 10	A 0.5	FRI	1, 100		25	1		Numerous jumps in bay
Sept 23 1954	A 0.5	FRI	400	104	30	4	2 cohos	Pink spawning over
Aug 24	A 0.5	FRI	1,800	0	0	0		500 off mouth. Jumps outside
Sept 9	G	FRI	13,000					Few dead pinks. 14,000 at mouth
1955								
July 9	G 0.5	FWS	0		0		3 reds	
July 30	G 0.3 G 0.5	FWS FWS	0		0		200 reds 250 reds	
July 31 Aug 7	G 0. 2	FW5	40		0		50 reds, 10 coh	os
Aug 17	G 0. 3	FWS	200		Ö		001000, 10000	50 pinks at mouth
Aug 21	G 0.2	FW5	5,000		0			5,000 pinks at mouth
Aug 26	A 0.5	FRI	20,000		0			Many in bay and mouth
Sept 5	A 0.5	FRI	35,000		0			5,000 between marker and lake
1956 Aug 11	G 1.0	FWS	0		0			100 pinks and 100 chums
Ana 10	G 1 0	FWS	100		25			at mouth None at mouth
Aug 19 Aug 26	G 1.0 G 1.0	FW5	1,500		0			>5,000 pinks at mouth
Sept 2	G 1.0	FWS	1,300		1, 100			-, F we show a
Sept 4	G 1.0	FW5	0		0			100 pinks and 1, 100 chums
Sept 7	G 1.0	FW5	20,000		0			at mouth >20,000 at mouth and
					14:	2		>50,000 in bay

# ESCAPEMENT RECORD - Continued

Date	SUR VI Mi	EYED les	Ву	PIN Live	NK Dead	CH Live	UM Dead	OTHER SPECIF	ES REMARKS
			•						
1956 Sept 1	2 G 1	. 0	FWS	35,000		0			>100,000 at mouth,
Sept 2 Sept 2 1957			FWS FWS	4, 200 3, 500		3,600 2,500			>50,000 in bay
July 1 July 3	1 G		FW5 FWS	20 1,500				20 reds	
Aug 1 Aug 1 Aug 1	1 G 1	<b>.</b> S	FW5 FW5 FWS	3,000 1,000		50		20 reds	
Aug 2			r FRI	1,500					2,000 pinks and 1 chum at mouth
Sept Sept			r FRI FWS	2,500 1,407		18			300 at mouth 221 pinks and 3 chums in intertidal zone
Sept 1 Sept 2 1958			r FRI eFWS	1,200 1,500		300		1,000 cohos	
July 2			FWS					24 reds	
Aug 1 Aug 1			FW5 FWS	50 50		12		1SO reds	
_	25 A		FRI FWS	0 580		0 60			None observed off mouth >120 pinks in high tide
Sept 1	7 mar	ker	FWS	100					zone
Sept 1 19 <b>5</b> 9			FRI	100		0			None off mouth
July 2 1960		·S reco	FWS						No salmon observed
1961	110	10001	. C.C						
Sept 1: 1962		. 0	ADF	50,000		200			
Aug 1	8 A .0 A 1	0	ADF ADF						3,000 at mouth 20,000 at mouth
-			ADF	1S,000					15,000 at mouth
			ADF	36,000				S,000 reds	9,000 at mouth; 25,000 in intertidal zone
Sept 1963	9 <b>G</b> 0	<b>.</b> S	ADF						No fish observed
Aug 1	19 A l	ength	ADF						S,000 pinks at mouth; 1,000 in intertidal zone
	28 A 1		ADF						3,000 in intertidal zone; many dead
Sept	3 G 0	. 7	ADF			1,300			Log jam (seemed impass- able)



EASTERN, CHATHAM STRAIT, TEBENKOF BAY, 1.5 miles E. of entrance to Elena Bay.

MAIOR SPECIES Pink.

OTHER SPECIES Chum, red, coho.

AVERAGE WIDTH/DEPTH 601/12".

AVERAGE WIDTH/DEPTH 60'/12".

ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES Excellent. Nearly continuous spawning riffles of coarse grayel.

STREAM TEMPERATURES Normal-range. Observed temperatures: S7° F., 9/4/49; S3° F., 9/2/S0; 53° F., 9/17/50; S6° F., 9/10/51; S3° F., 9/20/51; S0° F., 10/1/51; S1° F., 9/12/52; S1.5° F., 9/27/52; S4° F., 9/10/S3; 49° F., 9/23/S3.

VALLEY DESCRIPTION Comparatively wide valley, thickly-covered with brush. Upper course winds through brushy valley.

DRAINAGE 8.3 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE Anchor just S. of 2 islands close to mouth of stream in 2.5 f athoms, well-sheltered from all winds. Sticky bottom.

TRAILS AND SURVEY ROUTES Stream is easy to wade at low to normal water stages.

AERIAL SURVEY NOTES Easy to survey except after heavy rains; light sometimes a problem due to timber.

#### INTERTIDAL ZONE

LENGTH 0.5 mile. GRADIENT AND VELOCITIES Gentle. BOTTOM Gravel. LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS Several large pools.

SPAWNING AREAS Continuous riffle offering excellent spawning in the upper 200 yards.

GENERAL NOTES Very heavily used during normal runs.

#### UPSTREAM

LENGTH ACCESSIBLE To lake. GRADIENT AND VELOCITIES Gentle.

BOTTOM Gravel, some sand, and silt.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS None.

Considerable splitting in upper portion. TRIBUTARIES

SCHOOLING AREAS Plenty of good resting pools under windfalls and log jams.

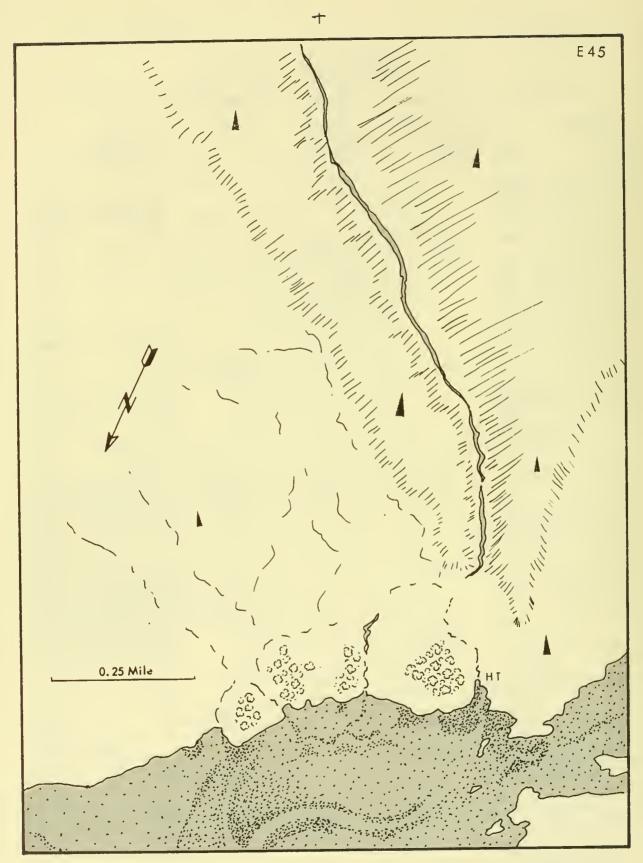
SPAWNING AREAS Good spawning facilities. Continuous riffle.

GENERAL NOTES Local residents call this stream Sockeye Creek. There is good spawning area for red salmon above lake. It is suggested that escapement data for stream 44C and stream 44D may be intermingled due to some uncertainty in the stream numbers on this data.

Date	SURVEYED Miles	Ву	PINI Live	ς Dead	CHU Live	M Dead	OTHER SPECIES Live	REMARKS
4040								
1940 Sep <sup>‡</sup> 18 1943	0.7	FWS	125,000					75,000 at mouth
Sept 10 1944	3.0	FWS	25,000					\$0,000 at mouth
Sept 20 1946	1.2	FWS	67,500		7,500			
Sept 29 1947	1.0	FWS	SO, 000					
Oct S 1948	3.7	FWS	150,000		25			
Oct 1 1949		FWS	100,000					A few chums
Aug 30		FWS	3S,000					
Sept 6		FWS	15,000					
Sept 9 Sept 23 1950		FWS FWS	15,000					90% filled
Aug 30	A	FWS						No fish observed
Sept 8 19S1	3.5	FWS	6, 500		2			2.00.000.00
Aug 26	1.5	FWS	10,000		4			10,000 pinks at mouth
Sept 18 1952	0.7	FWS	20,000		1,000		7S cohos	1,000 pinks at mouth
Aug 26 Sept 16	A 1.S	FWS FWS						Good seeding of pinks 10,000-20,000 pinks in first bed
1953	<b>a</b> 1 0	77110					200 400 1	
July 19	G 1.0	FWS FWS	100				300 <b>-</b> 400 reds	
Aug S Aug 21	A 0.5 G 1.0	FWS	60					
Sept 1S 1954	G 1.0	FWS	3, 100		<b>7</b> 6			
July 22	G	FWS					7S reds	
Aug 12	G	FWS	6S		S		100 reds	2,000 pinks and 500 reds at mouth
Aug 24	G	FWS	1,800		200			3,000 pinks in bay and at mouth
Sept 1		FWS	8,000					Estuary
Sept 13 1955	G 0.S	FWS	1S, 600				3 cohos	10,000 pinks at mouth
Aug 22	G 0. S	FWS	100 000					No fish observed
Sept 17	G 1. S	FWS	100,000					15,000 pinks at mouth
Oct 1 1956	G 0.7	FWS	20,000					Plus S, 000 spent
Aug 10 Aug 20	0.5	FWS FWS			100			20 chums at mouth
Sept 2	0, 3	FWS	10,000	3	0,000			
Sept 4		FWS	10,000	3	0,000			28,000 pinks and 12,000 chums at mouth
Sept 12	1.0	FWS	10,000		14	-6		25,000 pinks at mouth

# ESCAPEMENT RECORD - Continued

5	SURVEYED		PINK	CHUM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live Dead	Live Dead	Live	
1956						
Sept 26	1.0	FWS	50,000	5,000		
Sept 30 1957	1. 2	FWS	80,000	200		600 pinks at mouth
July 2S	G	FWS		50		
Aug 17	A 0.5	FWS				200 fish in salt water
Aug 18	G	FWS				Few pinks; 500 chums at mouth
Sept 9 1958	G 0.2	FWS	<b>7</b> 1	258		
Aug 7	G 0.2	FWS		500		
Aug 12		FWS		200		
Aug 16	G 0. 2	FWS		50		
Sept 13 1959	G 0.2	FWS		2		
Aug 11	A 0.5	FWS				300 chums and 150 pinks in salt water
Oct 7 1960	G 1.5	FWS	417		60 cohos	
June 24	A to lake	FWS				No salmon observed
Oct 17 1961		FWS				No salmon observed
Sept 9	A to lake	ADF				\$7,000 mixed, 200 red jumps
1962						4.000 4.1
July 28	A mouth					1,500 pinks at mouth
Aug 25	t <b>o</b> lake	ADF			600 reds in inlet	2,500 in intertidal zone
Sept S	G 1.2	ADF				3,500 mixed in stream; 300 in intertidal zone
1963						
Aug 19	A mouth	ADF				1, S00 pinks at mouth;
		ADE			600 anaumina ra	overcast eds 2,000 at mouth; 2,500
Aug 28	to lake	ADF			ooo spawning re	in intertidal zone
Sept 5	G 1, 2	ADF			3,500 mixed fi	sh Cohos coming in; 300 fish at mouth



E 45

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, PETROF BAY, E. central shore,

MAJOR SPECIES Chum. ESCAPEMENT TIMING Middle-late. SPAWNING FACILITIES Good. STREAM TEMPERATURES VALLEY DESCRIPTION DRAINAGE 2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES One mile from the mouth, the stream flows through a very brushy area with the growth down to the edge of the water.

OTHER SPECIES Pink.

AVERAGE WIDTH/DEPTH

AERIAL SURVEY NOTES The stream originates in a small lake.

#### INTERTIDAL ZONE

LENGTH GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS .

GENERAL NOTES This is a fair-sized stream which empties into the bay through a fan-shaped tideflat through many branches.

#### UPSTREAM

LENGTH ACCESSIBLE 1 mile. AVERAGE WIDTH/DEPTH SO'/ GRADIENT AND VELOCITIES Moderate. BOTTOM Gravel. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

	-							
	SURVEYED	)	PIN	K	CHUN	Л	OTHER SPECIES	REMARK5
Date	Live	Ву	Live	Dead	Live	Dead	Live	
1940		FF.10	60.000		7 000			
Sept 19	1.0	FWS	63,000		7,000			
1942	0.5	FWS	45,000		5,000			
Sept 21 19 <b>43</b>	0.5	1 11 3	43,,000		3,000			
Sept 10	1.0	FWS			10,000			30,000 at mouth
1944					•			•
Sept 21	0.3	FW5						8,000 at mouth
1945								
<b>S</b> ept 27	1.0	FWS						40,000 at mouth
1946		TT LEG						100 000
Sept 29		FWS						100,000 at mouth
1948 Oct 1		FWS			5,000			30,000 at mouth
1949		1,442			3,000			oo, ooo at moaan
Aug 28		FWS						30,000 at mouth
Sept 23		FW5						80 per cent filled
1951								
Aug 27	0.2	FWS	9		3			100 pinks at mouth
1953		57440	_		47			Page
Sept 16	G 0.5	FWS	5		47			Poor
1954	No recor	•d						
1955	140 16001	·u						
1000	No recor	d						
1956								
Sept 4		FWS	225		4, 750			250 pinks and 4, 275 chums
6 . 10	0.0	THAT						at mouth 150 pinks at mouth
Sept 12	0. 2 1. 0	FWS FWS	2, 450		300			600 pinks and 100 chums at
Sept 15	1.0	1.44.2	2, 450		300			mouth
Sept 25	1.0	FW5	1,500		1,000			Good seeding
Sept 29	0.6	FWS	9,700		22,000			175 pinks and SO chums at
•								mouth
1957								N. C. J. 1
Aug 17	A 0.5	FWS	C.F.		c			No fish observed
Aug 25	G 0. 2 G 0. 2	FWS FWS	65 13S		6 <b>20</b> 6			
Sept 10 1958	G 0. 2	1.44.2	155		200			
Aug 9	G 0. 2	FWS						No fish observed
Sept 13	G 0.3	FW5	12		3			
19 <b>5</b> 9								
Aug 28	A 0.5	FWS	75					500 salmon in salt water
Oct 7	G 0.2	FWS						No fish observed
1960	A 1	L ADE						No fish observed
Oct 17 1961	A lengt	II ADF						1.0 22011 00002 1000
Sept 14	G 0.7	ADF	600		900	384		200 pinks at mouth
1962								
	No reco	ord						
					7.0	-0-		

# ESCAPEMENT RECORD - Continued

	SURVEYED		PII	NK	CHUM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live Dead	Live	
1963							
Aug 19	A mouth	ADF					200 pinks at mouth
Aug 28	A	ADF					Carcasses indicate heavy seeding
Sept 9	G 0.2	ADF					120 mixed fish in stream; 2,500 fish at mouth; water too dark to see

S6°21.7° N. 134°03.9° W.

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, PETROF BAY, W. central shore.

MAJOR SPECIES Pink. OTHER SPECIES Chum.
ESCAPEMENT TIMING Middle-late.
SPAWNING FACILITIES Streambed is well suited for spawning.
STREAM TEMPERATURES
VALLEY DESCRIPTION Dense, brush-covered valley.
DRAINAGE 2.4 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

AVERAGE WIDTH/DEPTH

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 0.7 mile. AVERAGE WIDTH/DEPTH 551/10".

GRADIENT AND VELOCITIES Moderate.

BOTTOM Medium to fine gravel.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES There is 1 small tributary entering the stream which drains a pond on the W. slope.

The stream branches about 0.7 mile upstream.

SCHOOLING AREAS

SPAWNING AREAS Excellent.

GENERAL NOTES

	5 UR VEYED		PIN		CHU		OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1940								
Sept 19 19 <b>42</b>	0.7	FWS	51,000		9,000			
Sept 22 1943	0.5	FWS	15,000		5,000			
Sept 9 1944	0.5	FWS			25,000			20,000 fish at mouth
5ept 21 1948	0.2	FWS	1,200		800			
Oct 1 1953		FWS	10,000					
5ept 15 1954	G 0. 2	FWS	14		350			Many dead chum along banks
1955	o record							
1955 Aug 6	G 0. 2	FWS						No fish observed
Aug 22 1956	G 0.2	FWS	50		8			
Sept 12	0.2	FWS						5,000 pinks at mouth
Sept 25 1957	1.0	FWS	3,500		3,500			,
<b>A</b> ug 17	A 2.0	FW5						Water too low for fish
Aug 25	G 0, 2	FW5			4			
Sept 9 1958	G 0. 2	FWS	112		294			
Aug 17	G 0. 2	FW5						No fish observed
Sept 13	G 0. 2	FWS						12 pinks and 66 chums in tidal zone
1959		77110	E00		200			
Aug 28 1960	A 0.5	FWS	500		200			
Oct 17 1961	A length							No fish observed
Aug 20	A	ADF						500 at mouth
Sept 9 1962	A mouth	ADF						4,000 in intertidal zone
Aug 29	A mouth							1,500 at mouth
<b>S</b> ept 9 1963	G 1.5	ADF	200		2,500			Good distribution all the way upstream
Aug 19	A mouth							Brushy and dark
Sept 7	G 0.5	ADF			1,000			Water high and dark

56°20.6" N. 134°03.3" W.

E 45B

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, PETROF BAY, head of large bight on SE. corner.

MAJOR SPECIES Pink.

ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES Has good spawning facilities for one-quarter of a mile.

STREAM TEMPERATURES Observed temperature: S4° F., 9/4/49.

VALLEY DESCRIPTION Brush valley.

DRAINAGE Approximately 2 square miles.

STREAM MOUTH IDENTIFICATION

ANCHORAGE A skiff can best be left at the left bank by a small, steep beach.

TRAILS AND SURVEY ROUTES The stream is easy to travel.

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH 0.2 mile. AVERAGE WIDTH/DEPTH 10 1/2 GRADIENT AND VELOCITIES Gentle to moderate.

BOTTOM Fine gravel and shells.

LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 0.08 mile. AVERAGE WIDTH/DEPTH 8'/3".

GRADIENT AND VELOCITIES Moderate.

BOTTOM Small, broken rock.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

TRIBUTARIES

SCHOOLING AREAS Many holes under logs.

SPAWNING AREAS

GENERAL NOTES This is a small stream which branches at the timber edge into two small brooks, each of which extends about 150 yards into the timber where impassable falls prevent the further ascent of salmon.

S	URVEYED	•	PIN		CHU		OTHER SPECIES	REMARKS
Date	Miles	By	Live	Dead	Live	Dead	Live	
1940								
Sept 19 1942	0. 1	FWS	1,500					Capacity
Sept 22 1948	0.1	<b>F</b> WS	5,000		1,000			Heavy
Oct 1 1949		FWS	3,000					Excellent
Sept 4 1953	G 0. 2	FWS	10			170		
Sept 16 1954	G 0.2	FWS	7		42			
Sept 1S	G 0. 2	FWS	42		180			4,000 pinks and 1,000 chums in estuary
Oct 2 1956	G 0, 2	FWS	400			30		
Sept 2		FWS	S,800		200			4,400 pinks at mouth
Sept 12	0.2	FWS	100					5,000 pinks at mouth
Sept 25 1987	0.5	FWS	1,500		1,000			
Sept 10 1958	G 0. 2	FWS	8		113			
Aug 9	G 0.2	FWS						No fish observed
Sept 13 19S9	G 0. 2	FWS			9			
N 1960	o record							
Oct 17	A lengtl	a ADF						No fish observed
1961								
Sept 9	A 1.0	ADF						Dead pinks present; most of fish spawned
1962								
1963	No reco							
Aug 28	A	ADF			400			Jumps at mouth
Sept 9	G 0.2	ADF			130			Water high and dark

E 45C

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, PETROF BAY, head of W. arm.

MAJOR SPECIES Pink.

ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES Good but limited because of size of stream.

STREAM TEMPERATURES Observed temperature: 49° F., 9/4/49.

VALLEY DESCRIPTION Valley overgrown with brush.

DRAINAGE

STREAM MOUTH IDENTIFICATION

ANCHORAGE Leave skiff at the wooded point on the right hand side near the mouth TRAILS AND SURVEY ROUTES Game trails along banks. Easy walking along gravel bars. AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH 0.12 mile.

GRADIENT AND VELOCITIES Gentle.

BOTTOM Fine gravel and shells.

LOW TIDE LOCATION

HIGH TIDE LOCATION

SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 0.7 mile. AVERAGE WIDTH/DEPTH 121/3".

GRADIENT AND VELOCITIES Moderate.

BOTTOM Broken rock gravel; good.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS No serious obstructions.

TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS Good.

GENERAL NOTES This stream averages about 30t in width for three-quarters of a mile upstream.

	SURVEYED		PIN	K	CHU	M	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1940								
Sept 19	0.7	FWS	15,000					
1942								
Sept 22 1948	0.5	FWS	6,000		1,000			
Aug 28		FWS	30,000					
Oct 1 1949		FWS	15,000		7,000			Seeding excellent
Sept 4 1954	0. 2	FRI	15		125	12		
Sept 15	G 0. 2	FWS	78		250			70% chums and 30% pinks in bay
1955	G 0. 2	FWS						No fish observed
Aug 6 19 <b>5</b> 6	G 0, 2	L W 3						No iish ooserved
Sept 12		FWS						10,000 pinks at mouth
Sept 25 1957	A 1.0	FWS	10,000		3,000			
	No recor	d						
1958								
1959	No recor	d						
1939	No recor	d						
1960								
10.61	No recor	d						
1961 Sept 15	G 1.5	ADF	2,000		600		200 cohos	Many dead
1962	0 1.0	11151	=, 000				200 0000	,
Aug 29	A 0.5	ADF			300			500-600 at mouth
Sept 8 1963	G 0.5	ADF						Few jumps
Aug 19	A mout	h ADF						l,500 at mouth; brushy, overcast

56°22.4' N. 134°07.3' W.

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, THETIS BAY, central E. shore.

MAJOR SPECIES Pink.

OTHER SPECIES Chum.

AVERAGE WIDTH/DEPTH 601/

ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES One mile above the edge of the timber is a fine gravel streambed providing excellent spawning area. Good spawning through 1 mile of grassy tideflats.

STREAM TEMPERATURES

VALLEY DESCRIPTION A low valley.

DRAINAGE 3.3 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH 1 mile of tideflats.
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 3.5 miles. AVERAGE WIDTH/DEPTH 601/GRADIENT AND VELOCITIES Moderate.
BOTTOM Fine gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS Excellent.

GENERAL NOTES This is a large stream and one of the better streams in Tebenkof Bay.

Date	SUR VEYED Miles	Ву	PINI Live	CHU Dead Live	JM Dead	OTHER SPECIES Live	REMARKS
		,					
1940 Sept 19	3.5	FWS	100,000	25,000			Excellent
1942	•••		100,000	20,000			Dicerent .
Sept 22 1943	1.0	FWS	35,000	8,000			Heavy
Sept 9 1948	3.0	FWS	10,000				Poor
Oct 1 1953		FWS	25,000	25,000			Excellent
Aug 18	G 1.0	FWS	0	200			
Sept 16 1954	G 0. 2	FWS	7	200			
1955	No record						
July 2S	G 0.2	FWS					No fish observed
Aug 22	G 0.2	FWS					No fish observed
1956 Sept 12		FWS					8,000 pinks at mouth
Sept 15	0.3	FWS	1,250	75			2,500 pinks and 300 chums at mouth
Sept 29 1957	0, 5	FWS	5,000	4, 200			100 pinks at mouth
Aug 14	G	FWS	8	30			
Aug 26	G	FWS					No fish observed
Sept 10 1958	G 0, 2	FWS	28	166			
Aug 26	A 0. S	FWS	50	4.0			
Sept 13 1959	G 0.5	FWS		15			
Aug 17	A 0.5	FWS					No fish observed. Dark water
1960							
Oct 17 1961	A length	ADF					No fish observed
Aug 20	Α	ADF					5,000 in schools; good showing
Sept 9	A 1.0	ADF					1, 200 mixed; 1, 500 chums at mouth; many dead
1962							do moder, many doda
Aug 10	A	ADF					600 at mouth; jumps in bay
Aug 29	Α	ADF					7,000 at mouth; scattered jumps
1963	A mouth	A DE					2 000 fish at mouth the
Aug 19	A mouth	ADF					2,000 fish at mouth; stream brushy, overcast
Aug 28	A	ADF					3,500 salmon in intertidal; stream almost dry

56°21.8° N. 134°10.0° W:

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, THETIS BAY, Head.

MAJOR SPECIES Pink.

ESCAPEMENT TIMING Late.
SPAWNING FACILITIES Good for length.

STREAM TEMPERATURES

VALLEY DESCRIPTION First half mile of this stream is a low, flat, and well-timbered valley.

DRAINAGE 4.1 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Small flats.

ANCHORAGE Off flats.

TRAILS AND SURVEY ROUTES Wade stream.

AERIAL SURVEY NOTES Too brushy for surveys.

### INTERTIDAL ZONE

OTHER SPECIES Chum.

AVERAGE WIDTH/DEPTH

LENGTH 0.05 mile.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Coarse gravel and boulders.
LOW TIDE LOCATION
HIGH TIDE LOCATION Timber.
SCHOOLING AREAS

SPAWNING AREAS Limited.

GENERAL NOTES Limited.

#### UPSTREAM

LENGTH ACCESSIBLE 0.7 mile. AVERAGE WIDTH/DEPTH 25 12".

GRADIENT AND VELOCITIES Moderate.

BOTTOM Gravel.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS Series of falls; appear to be complete barriers.

TRIBUTARIES None.

SCHOOLING AREAS Limited, probably mostly off mouth.

SPAWNING AREAS Good.

GENERAL NOTES Many windfalls are across the stream and thick brush covers the banks.

	SUR VEYED	)	PIN	νκ	СНИ	ΙΜ	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	TIME HARD
1943								
Sept 9 19 <b>4</b> 6	1.0	FWS	500		4,000			5,000 at mouth
Sept 20 1948	1.0	FWS	8,000		80			Good seeding
Aug 30		FWS	35,000					
Oct 1 19 <b>5</b> 1		FWS	12,000					Few chum; good seeding
Aug 27	0. 2	FWS	1		6			S00 pinks at mouth; poor seeding
Sept 16 19 <b>\$4</b>	G 0.5	FWS			48			Many dead chums
Aug 28	A	FWS						Schooled pinks around estuary; stream low
Sept 1	A	FWS	500					Poor showing; few jumpers in bay
Sept 15	G	FWS	3, SOO		1,500			Chums excellent; expect good pinks
19 <b>S</b> S Aug 20	G 0.3	FWS						No fish observed
Oct 2 1956	0.2	FWS	300	25				
Aug 26		FWS						20 pinks and 8 chums at mouth
Sept S		FWS	2,500		500			3,400 pinks and 100 chums at mouth
Sept12	1.0	FWS	2,000		20			3,000 pinks at mouth
Sept 15 Sept 25	0.2 1.0	FWS FWS	530 7,000		20 3,000			2,000 pinks at mouth
Sept 29	0.7	FWS	18,000		2,000			200 pinks and 25 chums at at mouth
1957	40.5	TT 110						
Aug 17 Aug 29	A 0.5 G 0.2	FWS FWS						No fish observed No fish observed
Sept 10	G 0. 3	FWS	100		1,500			No Hall observed
1958					•			
Aug 26	A 1.0	FWS	200		110			Species not certain
Sept 13 1959	G 0. 2	FW5	20		110			50 pinks and 300 chums in tidal zone
Aug 28 1960	A 0. S	FWS	150		28			Water clear and low
Oct 17 1961	A length	1 ADF						No fish observed
Aug 20	A	ADF						3,000-5,000 at mouth; 500 in intertidal zone
Sept 9	A	ADF	1,500					2,000 in intertidal zone
Sept 1S	G 0.1	ADF	1,000		200	415		

### ESCAPEMENT RECORD - Continued

SUR VEYED		PINK		CH	UM	OTHER SPECIES	REMARKS	
Date	Miles	By	Live	Dead	Live	Dead	Live	
1962								
July 31	A	ADF						No fish observed; no jumps in bay
Aug 10	A mouth	1 ADF						Few jumps in bay
Aug 29	A mouth	1 ADF						6,000 at mouth; no pinks observed in stream
1963								
Aug 19	A mouth	a ADF						3,000 pinks at mouth; brushy
Aug 28	Α	ADF						1,000 fish at mouth
Sept 4	G 0.1	ADF						780 mixed fish - walked to falls, nothing above; spawning activity good

56°23.1' N. 134°10.9' W.

E 46B

EASTERN, CHATHAM STRAIT, TEBENKOF BAY, THETIS BAY, W. shore.

MAJOR SPECIES Pink. OTHER SPECIES Chum, coho. ESCAPEMENT TIMING Early-middle-late. SPAWNING FACILITIES Good. STREAM TEMPERATURES VALLEY DESCRIPTION Low, wooded valley. DRAINAGE 2 square miles (polar planimeter). STREAM MOUTH IDENTIFICATION Salt chuck; falls at mouth. ANCHORAGE Outside chuck or off #46. TRAILS AND SURVEY ROUTES Log road up N. shore. AERIAL SURVEY NOTES Too brushy to survey.

#### INTERTIDAL ZONE

LENGTH 0.2 mile.

GRADIENT AND VELOCITIES Gradual.

BOTTOM Fine gravel and sand.

LOW TIDE LOCATION Salt chuck.

HIGH TIDE LOCATION Edge of brush.

SCHOOLING AREAS

SPAWNING AREAS The first quarter of a mile of the stream has good spawning area.

GENERAL NOTES Intertidal zone wanders through marshy area.

#### UPSTREAM

LENGTH ACCESSIBLE 0.5 mile.

GRADIENT AND VELOCITIES Moderate.

BOTTOM Small gravel.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS

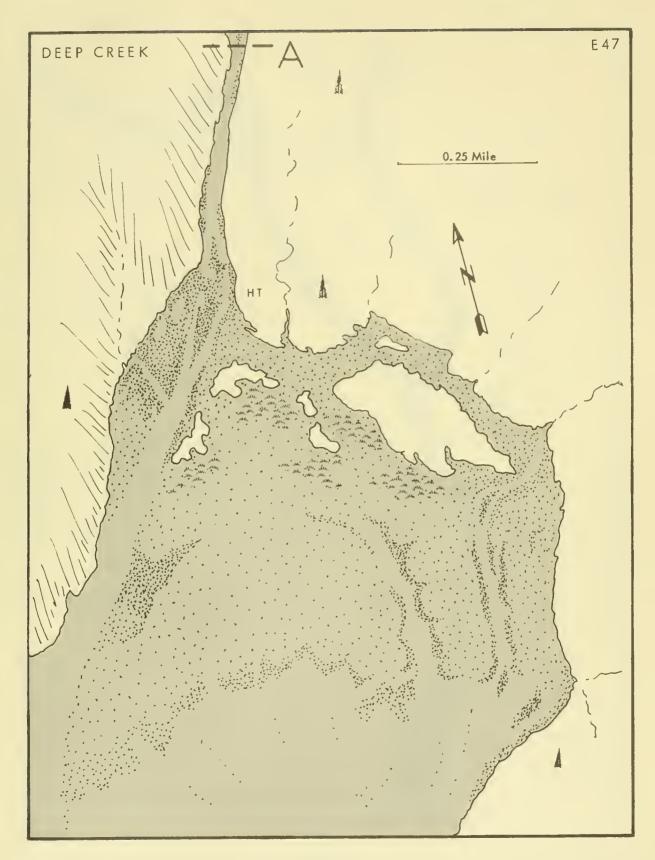
TRIBUTARIES

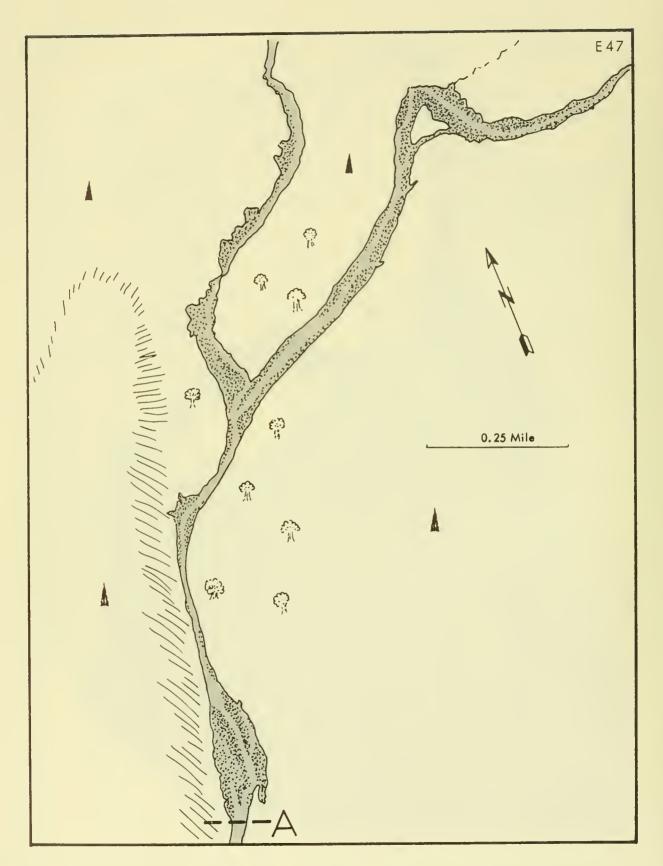
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES N. side of the stream is logged.

	SURVEYED		PINK		CH	UM	OTHER SPECIES	REMARK5
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1943								
5ept 9	1.0	FWS			few			1,000 fish at mouth
1946								
Sept 29 1948	1.0	FWS	10,000		500			Excellent seeding
Oct 1		FWS	15,000					Excellent seeding
1953			,					3
5ept 16	G 0. 2	FWS	9		255			Much of spawning rubble exposed
1954								•
	No recor	d						
1988								
July 13	G 0. 2	FWS						No fish observed
Aug 20	G 0.2	FWS						No fish observed
19\$6 5ept 12	0.2	FW5	50					S,000 pinks at mouth; poor
3ept 12	0. 2	1 44 3	30					showing
5ept 26 1957	1.0	FWS	1,500					Fair showing
Aug 17	A 2.0	FWS						25 fish seen
5ept 10	G 1.0	FWS	8		142	900		
1958								
July 3	G 0.5	FWS						No fish observed
Sept 13 1959	G 0.2	FWS			4			90 chums in tidal zone
Aug 17	A 0.5	FW5						No fish observed
Aug 26 1960	A 0.5	FW5						No fish observed
Oct 17	A lengtl	h ADF						No fish observed; water dark
1961 Sept 28	A	ADF						3,000 dead off mouth
1962	11	1251						•,
July 28 1963	Α	ADF						No fish observed; low tide
Aug 19	A mout	h ADF						300 pinks at mouth; brushy
Sept 4	G mout	h ADF						Cohos jumping in chuck; pinks and chums in shallow of chuck





E 47

EASTERN, Chatham Strait, Red Bluff Bay, SW. head of bay.

MAJOR SPECIES Pink, chum. OTHER SPECIES ESCAPEMENT TIMING Early-middle.
SPAWNING FACILITIES Good.
STREAM TEMPERATURES
VALLEY DESCRIPTION Glacial origin. Low wooded valley.
DRAINAGE 38.2 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION Flats at head of bay.

ANCHORAGE Off old cannery inside entrance to bay.

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Seldom able to survey due to severe downdrafts and turbulence in this area.

#### INTERTIDAL ZONE

LENGTH 0.2 mile.
GRADIENT AND VELOCITIES Gradual.
BOTTOM Medium gravel.
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS Several good pools.

SPAWNING AREAS Riffles throughout.

GENERAL NOTES This stream has a wide tideflat.

#### UPSTREAM

LENGTH ACCESSIBLE 3 miles.
GRADIENT AND VELOCITIES Swift.
BOTTOM Boulders and coarse gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH 100'/

### DEEP CREEK

### ESCAPEMENT RECORD

	SUR VEYED PINK		īΚ	CHUM	OTHER SPECIES	REMARKS	
Date	Miles	Ву	Live	Dead	Live Dead	Live	
10.45							
1943 Sept 19 1949	0.9	FWS	1,000				2,000 pinks at mouth
Sept 12 1952		FWS					Seeding excellent
Sept 17 1953		FWS					Few spawners; no dead
July 4	G 1.0	FWS	10		100		Poor seeding
July 10	G 0.5	FWS	400		200		Poor seeding
July 23	A 1.0	FWS	150		200		Poor seeding
July 30	G 0.5	FWS	700		0		Poor seeding
Aug S	G 0.5	FWS	500		6		Poor seeding
Aug 10	G 0.5	FWS	3,000		100		Poor seeding
Aug 18	G 0.5	FWS	300		0		Poor seeding
Aug 21	A 1.0	FWS	3,000		1,000		Poor seeding
Aug 21 1954	G 0. S	FWS	150		3		Poor seeding
July 20 1955	G	FWS					Little or no fish in bay; no rating
Sept 7 1956	G 0.5	FWS	6,000				Fair seeding
July 25		FWS			2		150 chums at mouth
July 29	1.0	FWS	16		20		150 pinks at mouth
July 31	1.0	FWS					500 pinks at mouth
Aug 6		FWS	800		200		
Aug 13		FWS	750		150		115 pinks at mouth
Sept 1	2. 0	FWS					4,000 pinks at mouth
Sept 3	1.0	FWS	1,923		288		
Sept12 1957	2.0	FWS					8,000 pinks at mouth
July 15	G 0. 2	FWS					5 dead
July 30	G bay	FWS	000				200 pinks off mouth
Aug 8	G	FWS	200				
Aug 11	G	FWS	11				400
Aug 19	G 0. 2	FWS					400 mixed fish
Aug 20	A lengtl		1 000		1 000		400 fish
Oct 8 1958	2.0	FWS	1,000	4	4,000		N. (* )
July 22	G 0. 2	FWS			8		No fish at mouth
July 24 Aug 30	G 0. 2 G 1. 0	FWS FWS	750		20 150		150 pinks in upper tidal zone 100 pinks and 4 chums off creek
1959							
July 27 1960	A 0.5	FWS			25		Low tide; water clear
1961	No reco						
1962	No reco	rd					
	No reco	rd			168		

DEEP CREEK ADF STAT. No. E 47

# ESCAPEMENT RECORD - Continued

	SURVEYED	)	PINK	CHUM	OTHER SPECIES	REMARKS
Date	Miles	By	Live Dead	Live Dead	Live	
1963						
July 23	G 0.7	ADF	2, 200	few		Fish in first 4 holes above
Aug 12	G 2.0	ADF	10,000	few		intertidal zone Ideal conditions

56°49.7° N. 134°41.7° W.

EASTERN, FREDERICK SOUND, RED BLUFF BAY, outside of bay, S.

MAJOR SPECIES Red. OTHER SPECIES
ESCAPEMENT TIMING Early.
SPAWNING FACILITIES Good above lake.
STREAM TEMPERATURES
VALLEY DESCRIPTION Small box canyon around lake.
DRAINAGE 6.8 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION Falls at tidewater.

ANCHORAGE Advise anchorage in Red Bluff Bay.

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES Milky white stream makes it impossible to see fish. Caution due to downdrafts. Can land on lake for foot surveys.

#### INTERTIDAL ZONE

AVERAGE WIDTH/DEPTH

LENGTH None.
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES Falls at tidewater.

UPSTREAM

LENGTH ACCESSIBLE AVERAGE WIDTH/DEPTH 1201/2011.
GRADIENT AND VELOCITIES Moderate.
BOTTOM Gravel.
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS Off mouth at base of falls.

SPAWNING AREAS Fair.

GENERAL NOTES Short outlet between salt water and lake. Good red lake.

170

Date	SUR VEYED Miles	Ву	PINK Live Dead	CHUI d Live	M OTHER S Dead Live	PECIES REMAR	.KS
1943 Sept 19	1.0	FWS				Seeding fair	
1949						occurry rain	
Seρt 12 1952		FWS				Seeding excellen	t
Aug 12	1.5	FWS				2,000 salmon in mostly pink. Po	
1954 Sept 9 1955	S. 0	FWS		1,000		No dead	
	No record						
1956 Sept 9	2.0	FWS	S	46		1, SOO pinks and i	1,500 chums
1957						***	
June 22	-24 G G	FWS FWS				Few salmon at m 200 reds at mout	
June 27 July 10	G falls	FWS			78 reds		1
Aug 4	G falls	FWS	75		,0 1000		
Aug 8	G falls	FWS	100				
July 13-1	18 G	FWS				8 dead red	
July 19-2		FWS				4 to 100 reds seen	a daily
July 31	G to fal				18 reds		
Aug 1	G 0. 1	FWS			1 <b>0</b> 0 reds		
Aug 5	G	FWS			100 reds		
Aug 9 Aug 15	G G	FWS FWS			18 reds 50 reds		
Aug 30 1959	G to lake	FWS			00 1040	No fish observed	
July 1	G to lake	FWS			25 reds		
July 2	G to lake	FWS			30 reds		
	G to lake	FWS			40 reds		
	G to lake	FWS			12 reds 25 reds		
	G to lake	FWS FWS			1,000 reds		
	G to lake	FWS			800 reds		
July 25	G to lake	FWS			1,000 reds		
	G to lake	FWS				800 pinks and 500 mouth	) reds at
Aug 3	G to lake	FWS			125 reds		
Aug 4	Gto lake	FWS			11S reds		. 7
Aug 17 1960	A to lake	FWS				100 salmon at mo	outh
1961	No record						
1962	No record						
	No record						

ADF STAT. No.

56°42.2' N. 134°44.7' W.

E 48

EASTERN, CHATHAM STRAIT, GUT BAY, SW. end.

MAIOR SPECIES Red. ESCAPEMENT TIMING Early-middle-late. SPAWNING FACILITIES Poor. STREAM TEMPERATURES

VALLEY DESCRIPTION

DRAINAGE 6.5 square miles (polar planimeter).

STREAM MOUTH IDENTIFICATION

ANCHORAGE

TRAILS AND SURVEY ROUTES Stream very difficult to walk; deep, brushv banks.

AERIAL SURVEY NOTES Too brushy to survey.

### INTERTIDAL ZONE

OTHER SPECIES Coho.

AVERAGE WIDTH/DEPTH

LENGTH GRADIENT AND VELOCITIES BOTTOM LOW TIDE LOCATION HIGH TIDE LOCATION SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH ACCESSIBLE 0.5 mile to lake. AVERAGE WIDTH/DEPTH 401/12\* GRADIENT AND VELOCITIES Swift. BOTTOM Large granite boulders. MARKER DISTANCE MARKER IDENTIFICATION BARRIERS TRIBUTARIES SCHOOLING AREAS

SPAWNING AREAS Poor.

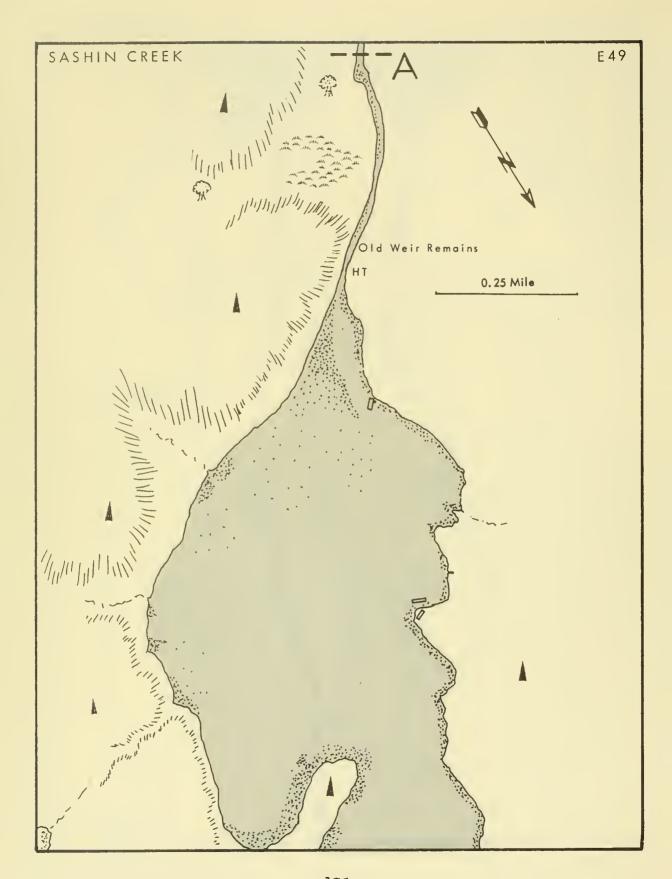
GENERAL NOTES This stream has little or no spawning area for pink salmon. Primarily a red salmon stream.

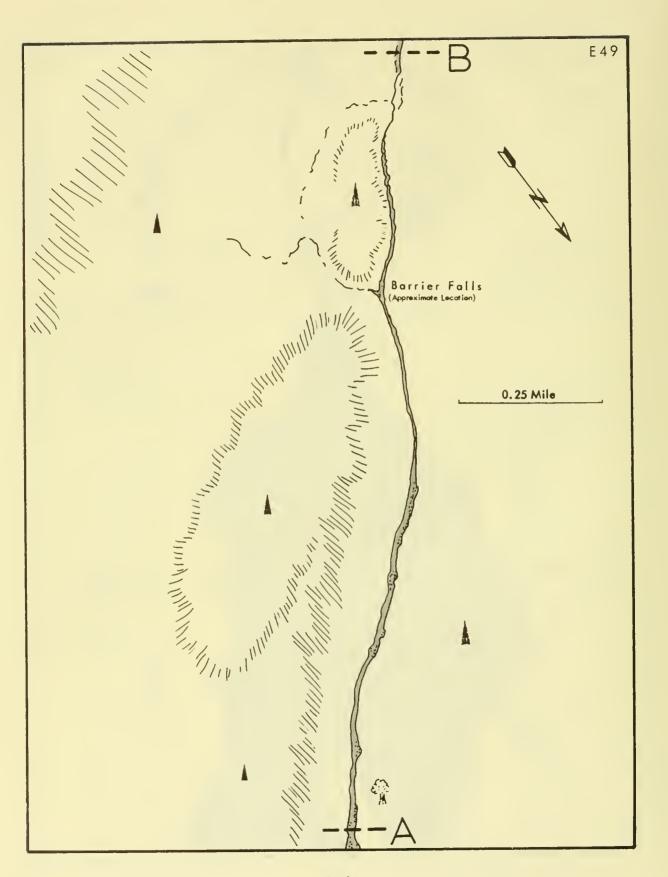
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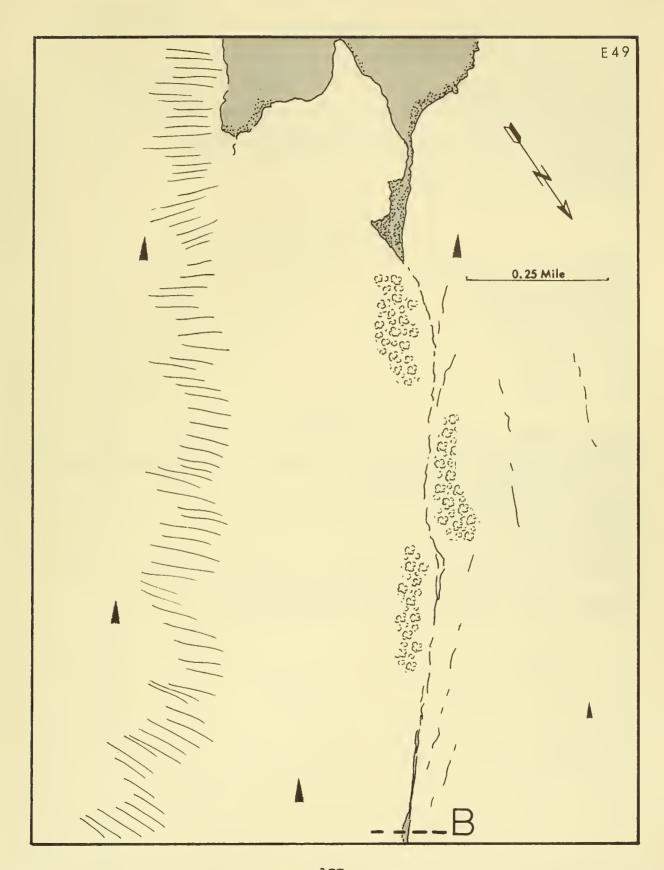
Date	SURVEYED Miles	Ву	PIN Live	K Dead	CHUI Live	M Dead	OTHER SPECIAL Live	ES REMARKS
1943 Sept 20 1949	0.7	FWS						1,000 pinks at mouth
Sept 12 19 <b>5</b> 2		FWS						Seeding excellent
Aug 14	A 1.5	FWS						150 pinks at mouth; poor seeding
Sept 17 1953		FWS						No fish at mouth
5eason		FWS						Examiner concluded good escapement of red and coho but poor for pink and chum
1954	_	FW5					50 reds	
June 21 June 26	G G 0.5	FW5					100 reds	
July 1	G	FWS					16 reds	
July 5	G 0.5	FWS					30 reds, 20	cohos
July 11	G	FW5					300 reds, 25	cohos
July 12	G 0. S	FWS					11 reds	77
July 16	G	FWS	200				12 reds	First showing of pinks behind markers
July 19	G 0.5	FWS	250				250 reds, 100	
July 20	G G 0 <b>.</b> S	FWS FWS	200		12		5,000 reds 500 reds, 1,500	1,000 reds in bay
July 25 1985	G 0. 3	r w 3	200		12		300 1243, 1,300	Conos
Season		FWS	500					
1956								
July 2	G 0. 2	FWS						500 pinks at mouth
July 4	G 0.5	FWS					8 reds	300 pinks at mouth
July 9	G0.5	FW5					3 reds	50 pinks at mouth
July 15	A	FW5					500 reds	20 pinks at mouth
July 16	G 1. 0 G 1. 0	FWS FWS					4 reds	20 pinks at mouth 5 pinks at mouth
July 22 July 30	G 0. 2	FW5					50 reds	2,500-3,000 pinks at mouth
July 31	00.2	FW5					3,000 reds	_, , , , ,
Aug 10		FWS					-,	3 chums at mouth
Sept 3	1.0	FW5	2		5			1 pink at mouth
Sept 6		FWS						25 pinks at mouth
Sept 10	0.7	FW5	71					90 pinks at mouth
Sept 28 1957	0. 2	FWS	7					
June 25-								
July 5	G 0.5	FWS						150 fish at mouth
July 12	G lake	FWS						No fish in stream; 25 in mouth
Sept 30	G 0. 2	FW5					10 cohos	No jumping in bay

# ESCAPEMENT RECORD - Continued

	SURVEYED		PINK		СН	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
1958 July 7 July 23 July 24 Aug 1 Aug 4 Aug 8 Aug 10	G 0. 1 G 0. 1 G 0. 1 G 0. 1 G 0. 1 G 0. 1	FWS FWS FWS FWS FWS FWS					200 reds 200 reds 600 reds 500 reds 300 reds 600 reds 200 reds	
Aug 30	G 0. 2	FWS	200		50			75 reds and 50 pinks
1959 Aug 17 1960	bay No record	FWS						in tidal zone 25,000 salmon in bay
1962	No record							
196 <b>3</b> Aug 11	G 0. 7	ADF	25					250 reds in lake; 6,000 at mouth







EASTERN, CHATHAM STRAIT, LITTLE PORT WALTER, Head.

MAJOR SPECIES 87% pink.

OTHER SPECIES Chum, coho, red.

AVERAGE WIDTH/DEPTH

ESCAPEMENT TIMING Middle-late.

SPAWNING FACILITIES There are about 1,500 yards of the stream available to fish.

STREAM TEMPERATURES

VALLEY DESCRIPTION Stream runs low between parallel mountain ranges.

DRAINAGE 3.3 square miles (polar planimeter). Stream drains a large lake.

ANCHORAGE

TRAILS AND SURVEY ROUTES

AERIAL SURVEY NOTES

#### INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

#### UPSTREAM

LENGTH 0.7 mile.

AVERAGE WIDTH/DEPTH 60'/12".

GRADIENT AND VELOCITIES

BOTTOM Pinks chose small to grapefruit-sized gravel or rubble; chums and cohos chose football-sized material with smaller particles mixed in.

MARKER DISTANCE

MARKER IDENTIFICATION

BARRIERS A falls blocks further ascent of fish 0.7 mile upstream.

TRIBUTARIES

SCHOOLING AREAS

SPAWNING AREAS Only about 1,500 yards of stream are available to fish because of high falls.

GENERAL NOTES A large survey activity is maintained at this stream.

Date	Pink	Chum	Coho	Red	King	Remarks
1934 Aug 18 Aug 19 Aug 20 Aug 21 Aug 22 Aug 23 Aug 24 Aug 25 Aug 26 Aug 27 Aug 28 Aug 29 Aug 30 Aug 31 Sept 1	310 278 10 0 51 9 41 30 62 9 196 41 0 890 100	1 1 0				
Sept 2 Sept 3 Sept 4 Sept 5 Sept 6 Sept 7	\$2 28 86 6 1,206	0 0 0 0 3 2				
Sept 7 Sept 8 Sept 9 Sept 10 Sept 11 Sept 12 Sept 13	48 5 32 205 14 235 2,736	1 0 1 0 1 0 5				
Sept 14 Sept 15 Sept 16 Sept 17 Totals 1935	12 0 82 6,952	0	1			
Aug 12 Aug 13-1 Aug 17 Aug 18 Aug 19 Aug 20	73 3 28 117					
Aug 21 Aug 22 Aug 23 Aug 24 Aug 25 Aug 26	574 700 130 90S 26S 100 36					
Aug 27 Aug 28 Aug 29 Aug 30 Aug 31 Sept 1 Sept 2	36 69 39 44 11 67 47					
Sept 3 Sept 4 Sept 5 Sept 6 Sept 7 Sept 8	12 81 20 68 214 77			179		

ADF STAT. No. E 49 SASHIN CREEK - Continued

Date	Pink	Chum	Coho	Red	King	Remarks
1935						
Sept 9	102					
Sept 10	264					
Sept 11	128					
Sept 12	543					
Sept 13	450					
Sept 14	477					
Sept 1S	66 19					
Sept 16 Sept 17	4					
Sept 18	287					
Sept 19	7					
Sept 20	9					
Sept 21	5					
Total	6,073					
19 <b>3</b> 6	5, 164	55	14			
Totals 1937	3, 104	33				
Aug 15	0					
Aug 16	25	1				
Aug 17	100	4				
Aug 18	23					
Aug 19	0	2	1			
Aug 20	122	3 15	1 2			
Aug 21 Aug 22	1,006 1,029	7		1		
Aug 23	186	·				
Aug 24	134					
Aug 25	857	3				
Aug 26	342	2				
Aug 27	123	3				
Aug 28	0 76					
Aug 29 Aug 30	89					
Aug 31	157	1				
Sept 1	280					
Sept 2	191	2				
Sept 3	189	2				
Sept 4	100	1				
Sept 5 Sept 6	19 <b>S</b> 461	3		2		
Sept 7	653	1				
Sept 8	806	5	4			
Sept 9	71		1			
Sept 10	Weir	washed out	0	_		
Totals 19 <b>3</b> 8	7, 085	53	8	3		
Aug 29	119					
Aug 30	322					
Aug 31	227 276					
Sept 1 Sept 2	160					
Sept 3	63					
Sept 4	39					
Sept 5	71					
Sept 6	9					
Sept 7	204 16					
Sept 8 Sept 9	800	2				
A						

Date	Pink	Chum	Coho	Red	King	Remarks
1940 Sept 3	2,904					
Sept 4	4,700					
Sept 5	5, 336					
Sept 6	4,000					
Sept 7	1,300					
Sept 8	0					
Sept 9	330					
Sept 10	660					
Sept 11	1,000					
Sept 12	0		_			
Total	47,594	131	1			
1941	160					
Aug 16	160 106					
Aug 17	353					
Aug 18 Aug 19	528					
Aug 20	840					
Aug 21	2, 313					
Aug 22	3, 781					
Aug 23	4,870					
Aug 24	4, 286					
Aug 25	8, 265					
Aug 26	1,310					
Aug 27	290					
Aug 28	32					
Aug 29	61					
Aug 30	1,064					
Aug 31	201					
Sept 1	479 323					
Sept 2 Sept 3	151					
Sept 4	3					
Sept 5	148					
Sept 6	280					
Sept 7	92					
Sept 8	1,535					
Sept 9	421					
Sept 10	37					
5ept 11	115					
Sept 12	155					
Sept 13	96 <b>3</b> 9 <b>5</b>					
Sept 14 Sept 15	779					
Sept 16	4,050					
Sept 17	4, 124					
Sept 18	6, 254					
Sept 19	3,783					
Sept 20	88					
Sept 21	1,239					
Sept 22	16, 397					
Sept 23	6,019					
Total	76, 104					
1942	c					
Aug 17 Aug 18	5 77					
Aug 19	21					
Aug 20	13					
Aug 21	0					
Aug 22	348					
				180		

Date	Pink	Chum	Coho	Red	King	Remarks
1942						
Aug 23	70					
Aug 24	1, 403					
Aug 25 Aug 26	511 184					
Aug 27	1,865					
Aug 28	898					
Aug 29	48					
Aug 30	1, 739					
Aug 31	481					
Sept 1 Sept 2	726 1 <b>, 34</b> 8					
Sept 3	1,315					
Sept 4	643					
Sept S	381					
Sept 6	125					
Sept 7 Sept 8	4,649 4,074					
Sept 9	2,975					
Sept 10	651					
Sept 11	13, 174					
Sept 12	9,072	1				
Sept 13 Sept 14	3,620 5,605	1				
Sept 15	3,088					
Sept 16	1,091	1				
Sept 17	625					
Sept 18-						
Sept 20 Sept 21	252 7,848					
Sept 22	9,436	2	2			
Sept 23	7,365	2				
Sept 24	2 <b>, 7</b> 40					
Sept 25	626					
Sept 26 Totals	\$8 88,846	7	2			
1943	20,010	· ·				
Aug 21	25		2			
Aug 22	111	4				
Aug 23 Aug 24	246 363	1 4	2	1		
Aug 25	286	3	2	1		
Aug 26-						
Aug 28	279		1			
Aug 29	1,205	S				
Aug 30 Aug 31	284 1, 107	1 6				
Sept 1	32	1				
Sept 2	98					
Sept 3	1,939	9				
Sept 4 Sept 5	0 <b>3</b> 6	4				
Sept 6	5	**				
Sept 7	6					
Sept 8	474	5				
Sept 9	341	2				
Sept 10 Sept 11	29 1 <b>, S73</b>	12	2			
Sept 12	1,829	27	1			
Sept 13	405	9		183		

Date	Pink	Chum	Coho	Red	King	Remarks
1943						
Sept 14	139	2				
Sept 15	222	S				
Sept 16	349	1				
Sept 17	131	1				
Sept 18	270	1				
Sept 19	1,467	34	4			
Sept 20	602	4	1			
Sept 21	1					
Sept 22	248	3	9			
Sept 23	500 37	4	3			
Sept 24 Sept 25	2					
Sept 26	16					
Sept 27	71	S	4			
Sept 28	29	2	2			
Sept 29	7	1				
Sept 30	17	1	2			
Oct 1	0		4			
Oct 2	2					
Totals	14,783	153	28	1		
1944						
Aug 25	1	9				
Aurg 26	SS	71	2			
Aug 27	126	44	1			
Aug 28 Aug 29	17 100	S 32	3	1		
Aug 29 Aug 30	28	3		1		
Aug 31	26	1				
Sep 1	173	s2				
Sept 2	198	44				
Sept 3	116	11				
Sept 4	259	20				
Sept 5	148	9		2		
Sept 6	197	16				
Sept 7	174	4				
Sept 8	113					
Sept 9	101	10		1		
Sept 10 Sept 11	285 1 <b>3</b> 0	10 2		1		
Sept 12	432	61				
Sept 12	612	54				
Sept 14	271	24				
Sept 15	164	27		1		
Sept 16	68	17				
Sept 17	42	8				
Sept 18	3					
Sept 19	14	13				
Sept 20	18	3				
Sept 21	106	21	3	1		
Sept 22	52	8	S	2		
Sept 23	8 0		2			
Sept 24 Sept 25	2					
Sept 26	0					
Sept 27	3	2				
Sept 28	o o	_				
Sept 29	0	7				
Sept 30	S	2	3			
Oct 1	1	2	14	7 Qh		

		5,7	CKEE!	· - Continued	4	2 43
Date	Pink	Chum	Coho	Red	King	Remarks
1944 Oct 2 Oct 3-4 Oct 5 Oct 6 Oct 7 Oct 8 Oct 9 Oct 10 Oct 11	3 0 2	2	17 <b>9</b> 28  9  7  9  30  1  6	1		
Oct 12 Oct 13 Oct 14 Oct 15-16 Oct 17 Oct 18		1	0 19 3 1			
Totals 1945 Aug 22 Aug 23 Aug 24 Aug 25 Aug 26 Aug 27 Aug 28 Aug 29 Aug 30 Aug 31 Sept 1 Sept 2 Sept 3 Sept 4 Sept 5 Sept 6 Sept 7 Sept 8 Sept 9 Sept 10 Sept 11 Sept 12 Sept 13 Sept 14 Sept 15	4,050 0 2 1 0 0 0 1 0 2 0 8 0 20 81 127 685 328 151 275 494 294 233 145 214 181	585	325	9		
Sept 16 Sept 17 Sept 18 Sept 19 Sept 20 Sept 21 Sept 22 Sept 23 Sept 24 Sept 25 Sept 26 Sept 27 Sept 28 Sept 29 Sept 30 Oct 1 Oct 2	72 18 600 277 110 50 21 54 280 103 75 291 113 91 9			185		

		3 7. 3	IIII CKEE	c - Continue	Q.	L 43
Date	Pink	Chum	Coho	Red	King	Remarks
1945 Oct 3 Oct 4 Oct 5 Oct 6 Oct 7 Oct 8 Oct 9 Oct 10	4 9 6 3 0 2 1					
Oct 11 Totals	4 5,457	123	588			
1946		123	300			
Sept 9	9					
Sept 10 Sept 11	54 21					
Sept 12	159					
Sept 13	130					
Sept 14	74					
Sept 15	153					
Sept 16	107					
Sept 17	115					
Sept 18	15					
Sept 19 Sept 20	31 7					
Sept 20	2					
Sept 22	35					
Sept 23	1					
Sept 24	5					
Sept 25	3					
Sept 26	-					
Sept 27	3					
Sept 28 Sept 29	3 1					
Sept 30	~					
Oct 1-4						
Oct 5	3					
Oct 6	1					
Oct 7-9						
Oct 10	1	-	206	_		
Totals 1947	933	5	286	2		
Aug 25	4					
Aug 26			1			
Aug 27 Aug 28	6		1			
Aug 29	- 14	3	2			
Aug 30	6	2	3			
Aug 31	26	4	S			
Sept 1	28	2	2	1		
Sept 2	18	5				
Sept 3	15	2		1		
Sept 4	5	2	2			
Sept 5 Sept 6	7 19	2	1			
Sept 6	58					
Sept 8	52	4	2			
Sept 9	123	1	3			
Sept 10	119	2				
Sept 11	118	2	3	186		
				186		

# SASHIN CREEK - Continued

Date	Pink	Chum	Coho	Red	King	Remarks
1947						
Sept 12	S7	7	2			
Sept 13	S4	6	2			
Sept 14	74	7	S			
Sept 15	47	15	1			
Sept 16	26	9	1			
Sept 17	<b>S</b> 9	4	1			
Sept 18	34	S	1			
Sept 19	140	2	7	1		
Sept 20	71	3	2			
Sept 21	<b>7</b> 9	2	3			
Sept 22	48	3	15			
Sept 23	33					
Sept 24	17	2				
Sept 25	12	3	3			
Sept 26	20	3	1			
Sept 27	4 7					
Sept 28		0	40			
Sept 29 Sept 30	39 31	8 6	\$1			
Oct 1	7	S	3			
Oct 2	Ś	S	1			
Oct 3	4	11	1			
Oct 4	0	2	2			
Oct 5		3	1			
Oct 6	_	· ·	-			
Oct 7	Weir remo	oved				
Totals	1,486	142	163	3		
1948	ŕ					
Aug 31	9					
Sept 1	9					
Sept 2	3					
Sept 3	22					
Sept 4	29					
Sept S	9					
Sept 6	18					
Sept 7	15					
Sept 8	18					
Sept 9	45					
Sept 10	72					
Sept 11	41					
Sept 12	33					
Sept 13 Sept 14	19 25					
Sept 15	18					
Sept 15	22					
Sept 17	S7					
Sept 18	43					
Sept 19	8					
Sept 20	19					
Sept 21	24					
Sept 22	15					
Sept 23	3					
Sept 24	3					
Sept 25	1					
Sept 26	S					
Sept 27	S					
Sept 28	1					
Sapt 29	1					

ADF STAT. No. E 49 SASHIN CREEK - Continued

Date	Pink	Chum	Coho	Red	King	Remarks
1948						
Sept 30						
Oct 1	-					
Oct 2	1					
Oct 3	1					
Oct 4-5	-					
Oct 6	2					
Oct 7 Oct 8	- 1					
Total	597					
1949	00,					
Aug 26	4					
Aug 27	4					
Aug 28	6					
Aug 29	35					
Aug 30	68					
Aug 31	58					
Sept 1	209					
Sept 2	154					
Sept 3	176					
Sept 4	169 1 <b>70</b>					
Sept S Sept 6	184					
Sept 7	243					
Sept 8	234					
Sept 9	143					
Sept 10	163					
Sept 11	164					
Sept 12	309					
Sept 13	344					
Sept 14	493					
Sept 15	492					
Sept 16 Sept 17	288 143					
Sept 18	81					
Sept 19	117					
Sept 20	66					
Sept 21	S9					
Sept 22	82					
Sept 23	52					
Sept 24	103					
Sept 25	27 38					
Sept 26 Sept 27	13					
Sept 28	4					
Sept 29	3					
Sept 30	4					
Total	4,902					
1950						
Aug 25	1	1	2			
Aug 26	- 1	0	12			
Aug 27	1	9 3	12 5			
Aug 28 Aug 29	2 2	-	1			
Aug 30	-		-			
Aug 30		1	-			
Sept 1	4	2	1			
Sept 2	1	-	1			
Sept 3	-	1	2			
				1 00		

Date	Pink	Chum	Coho	Red	King	Remarks
1950						
Sept 4	2	2	1			
Sept 5	1	1	1			
Sept 6	_	2	-			
Sept 7	_	_	-			
Sept 8	9	_	-			
Sept 9	-	_	-			
Sept 10	3	1	-			
Sept 11	11	3	-			
Sept 12	-	-	-			
Sept 13	2	-	-			
Sept 14	6	2	-			
Sept 1S	3	-	-			
Sept 16	-	-	-			
Sept 17	2	-	-			
Sept 18	24	9	2			
Sept 19	23	6	25			
Sept 20	5	1	5			
Sept 21	2	2	1			
Sept 22		4	3			
Sept 23	2	4	1			
Sept 24	1	4	-			
Sept 25	-	2	-			
Sept 26	2	4	-			
Sept 27	2	1	-			
Sept 28	1	-	2			
Sept 29	-	-	1			
Totals	112	6 <b>S</b>	66			
1951						
Aug 13	8					
Aug 14	22		1			
Aug 15	41	1				
Aug 16	37	2	4			
Aug 17	60		6			
Aug 18	68	1				
Aug 19	40		2			
Aug 20	7	2	1			
Aug 21	8	2	4			
Aug 22	10	1	3			
Aug 23	6					
Aug 24	7		1			
Aug 25	16		1			
Aug 26	19					
Aug 27	25					
Aug 23	26					
Aug 29	53					
Aug 30	35	4				
Aug 31	99	4 7				
Sept 1	131	3				
Sept 2	248	6				
Sept 3	131	6 3				
Sept 4	354	8				
Sept S	273	21				
Sept 6	360	53	10			
Sept 7	<b>493</b> 216	12	16			
Sept 8	217	20	18			
Sept 9	19 <b>3</b>	16	6			
Sept 10 Sept 11	178	9				
Sept 12	95	5	1			
Sept 12	93	•		189		

## SASHIN CREEK - Continued

Date	Pink	Chum	Coho	Red	King	Remarks
19\$1						
Sept 13	89	8	2			
Sept 14	92	10	-			
Sept 1S	53	8	1			
Sept 16	42	3	1			
Sept 17	108	7	-			
Sept 18	74 28	<b>4</b> 1	3 -			
Sept 19 Sept 20	9	_	-			
Sept 20	11	2	_			
Sept 22	46	1	2			
Sept 23	38	6	-			
Sept 24	32	6	-			
Sept 25	7	-	-			
Sept 26	-	-	-			
Sept 27	155	1 1 <b>3</b>	12			
Sept 28 Sept 29	155 43	9	11			
Sept 30	21	3	9			
Oct 1	12	_	2			
Oct 2	17	2	17			
Oct 3	1	-	-			
Oct 4	3	1	2			
Oct S	-	261	120			
Total 1982	4, 366	261	1 <b>3</b> S			
Aug 17		3	3			
Aug 18		-	7			
Aug 19		1	3			
Aug 20		1	6			
Aug 21		2	1			
Aug 22		4				
Aug 23	-	3				
Aug 24 Aug 25		3				
Aug 26-2	7 -	•				
Aug 28		3				
Aug 29			1			
Aug 30		1	1			
Aug 31		1	2			
Sep 1		<b>3</b> 6				
Sept 2 Sept 3		1				
Sept 4		3				
Sept S		4				
Sept 6		8	7			
Sept 7		7	1			
Sept 8	2	1	12			
Sept 9	-	1				
Sept 10 Sept 11		1 3				
Sept 12	_					
Sept 13	6	3	45			
Sept 14	2		13			
Sept 15	8	3	1			
Sept 16	16	3	27			
Sept 17	1	1	2			
Sept 18	S	1	2 2			
Sept 19	3		۷			

Date	Pink	Chum	Coho	Red	King	Remarks
1952						
Sept 20	2					
Sept 21	-					
Sept 22	-		3			
Sept 23	-					
Sept 24	Ī.		8			
Sept 25	2		5			
Sept 26	-		4			
Sept 27 Sept 28			*			
Sept 29	-	1	1			
Sept 30			1			
Oct 1			17			
Oct 2	1					
Oct 3-4	-					
Oct S			1			
Oct 6-8	-					
Oct 9			6			
Totals	45	70	182			
1953	2					
Aug 10 Aug 11	-					
Aug 11	4					
Aug 13	18					
Aug 14	S7	3	4			
Aug 1S	7	2				
Aug 16	27	3				
Aug 17	18					
Aug 18	8					
Aug 19	2	1				
Aug 20	1	2				
Aug 21 Aug 22	2 1	1				
Aug 23	18	Š				
Aug 24	<b>S</b> 1	8	3			
Aug 25	8	3				
Aug 26	2					
Aug 27	16					
Aug 28	23	1				
Aug 29	191	14	2			
Aug 30	136	4				
Aug 31	76					
Sept 1 Sept 2	6 <b>3</b> 6					
Sept 2	39					
Sept 4	33					
Sept S	105	9	1			
Sept 6	62	4				
Sept 7	99	23	16			
Sept 8	SS	2	25			
Sept 9	15	7				
Sept 10	11	5 7	21			
Sept 11		10	21 2			
Sept 12 Sept 13		3	2			
Sept 13	27	3 7	1			
Sept 15	2	3				
Sept 16	2	2	1			
Sept 17	1	6				

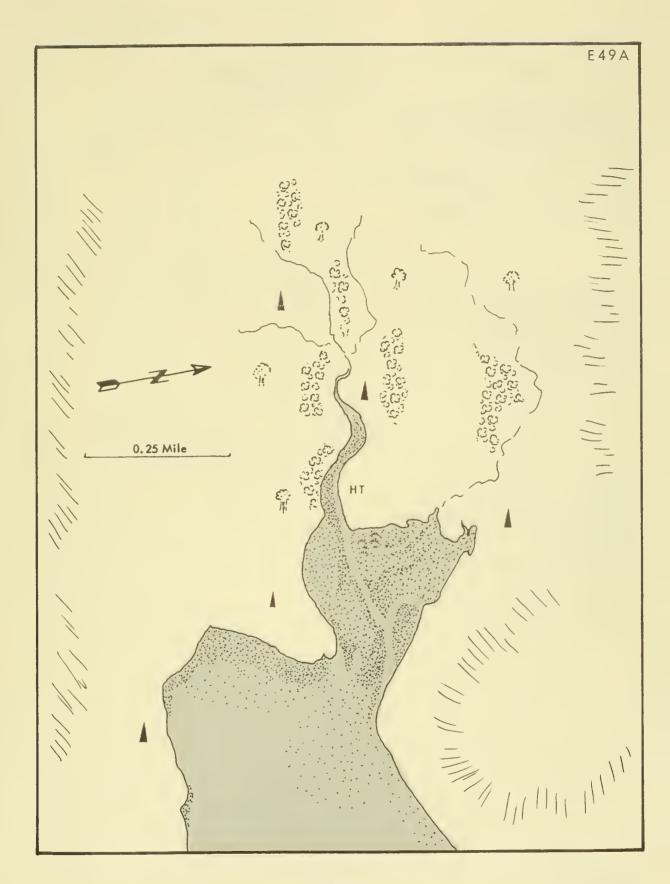
		0 A	SIIIN CREEK	- Continue	e d	E 49
Date	Pink	Chum	Coho	Red	King	Remarks
1953						
Sept 18		2	1			
Sept 19		-	1			
Sept 20	2	1	1			
Sept 21	-	1	2			
Sept 22		1	4			
Sept 23		-				
Sept 24		2				
Sept 25		-				
Sept 26		2	33			
Sept 27			2			
Sept 28-3	30	_	_			
Oct 1	1		1			
Totals	1, 164	143	116			
1 <b>954</b> Sept 6		9	2			
Sept 7		4	21			
Sept 8		7	18			
Sept 9			10			
Sept 10		2	5			
Sept 11		1	Ŭ			
Sept 12		_				
Sept 13		S	14			
Sept 14	3	1	2			
Sept 1S		-				
Sept 16-2	0	-				
Sept 21	4	2	5S			
Sept 22	S	1	8			
Sept 23			8			
Sept 24			10			
Sept 25	1		11			
Sept 26-						
Oct 5	717 4 4 4		-			
Oct 6	Weir pulled					
Totals 195S	13	25	154			
Aug S	2					
Aug 6	۷		1			
Aug 7	27		1			
Aug 3	41		1 1			
Aug 9	12		1			
Aug 10	11					
Aug 11	3		1			
Aug 12	22		-			
Aug 13	31					
Aug 14	13					
Aug 15	S		1			
Aug 16	46		4			
Aug 17	28					
Aug 18	23					
Aug 19	8					
Aug 20	47					
Aug 21	15					
Aug 22 Aug 23	67					
Aug 23 Aug 24	31 40					
Aug 25	61					
Aug 26	66		1			
Aug 27	2		1			
Aug 28	6 <b>S</b>			1.00		
,				192		

		3	MOMENT CREEK	Continu		4.45
Date	Pink	Chum	Coho	Red	King	Remarks
1955						
Aug 29	103					
Aug 30	298					
Aug 31	325		2			
Sept 1	1,744		44			
Sept 2	2, 243		11			
Sept 3	940		15			
Sept 4	502		2			
Sept 5 Sept 6	166 112					
Sept 7	193					
Sept 8	223					
Sept 9	218					
Sept 10	110					
Sept 11	204					
Sept 12	576	2	26			
Sept 13	369	4	8			
Sept 14	145 17		1			
Sept 15 Sept 16	3		_			
Sept 17	76		6			
Sept 18	21	2				
Sept 19	11					
Sept 20-21	-					
Sept 22	3					
Sept 23	5		22			
Sept 24	<b>4</b> 1		33			
Sept 25 Sept 26-28						
Sept 20-28 Sept 29	_		1			
Sept 30			1			
Oct 1-2	-					
Oct 3			7			
Oct 4-5		eir removed	-			
Totals	9, 267	8	168			
1956 Season	943					Expected low count - only
Jedson	943					575 pink fry went to sea
						the spring of 1955
1957						
Aug 2	10					
Aug 3 Aug 4	11 1					
Aug 5	0					
Aug 6	11					
Aug 7	15		1			
Aug 8	18					
Aug 9	15					
Aug 10	30					
Aug 11	57 52					
Aug 12	52 48					
Aug 1 <b>3</b> Aug 14	13					
Aug 15	27					
Aug 16	69					
Aug 17	79					
Aug 18	81					
Aug 19	56					
Aug 20	42			193		

bay

## SASHIN CREEK - Continued

Date	Pink	Chum	Coho	Red	King	Remarks
1957						
Aug 21	<b>67</b>					
Aug 22	722	3	4			
Aug 23	178	5	1			
Aug 24	106	1				
Aug 25	24		1			
Aug 26	14					
Aug 27	148					
Aug 28	70	1				
Aug 29	92	2				
Aug 30	94	3				
Aug 31	157	27	8			
Sept 1	373	32	5			
Sept 2	40	9				
Sept 3	9	6				
Sept 4	0	2	_			
Sept 5	35	11	2			
5ept 6	21	10	7			
Sept 7	20	8	5			
Sept 8	7	3	1			
Sept 9	0					
Sept 10	8					
Sept 11	0	7				
Sept 12	2	1				
Sept 13	2	1				
Sept 14	2	1				
Sept 15-19	0	6				
Sept 20	4 2	O				
Sept 21	0	1				
Sept 22 Sept 23-25	0	1				
5ept 25-25	0	3				
Sept 27-28	ō	3				
Sept 29	1	2	22			
Sept 30	1	2	14			
Oct 1-8	0	Weir removed				
Totals	2,834	140	71			
1958						
Aug 30	3	22	16			
1959						
Aug 17						Jerry Olsen reports 25,000 salmon in



56° 23.4° N. 134° 42.8° W.

EASTERN, CHATHAM STRAIT, BIG PORT WALTER, LOVER'S COVE, Head.

MAJOR SPECIES Pink. OTHER SPECIES
ESCAPEMENT TIMING Middle-late.
SPAWNING FACILITIES
STREAM TEMPERATURES
VALLEY DESCRIPTION
DRAINAGE 4.4 square miles (polar planimeter).
STREAM MOUTH IDENTIFICATION
ANCHORAGE
TRAILS AND SURVEY ROUTES
AERIAL SURVEY NOTES

INTERTIDAL ZONE

LENGTH
GRADIENT AND VELOCITIES
BOTTOM
LOW TIDE LOCATION
HIGH TIDE LOCATION
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

UPSTREAM

LENGTH ACCESSIBLE
GRADIENT AND VELOCITIES
BOTTOM
MARKER DISTANCE
MARKER IDENTIFICATION
BARRIERS
TRIBUTARIES
SCHOOLING AREAS

SPAWNING AREAS

GENERAL NOTES

AVERAGE WIDTH/DEPTH

AVERAGE WIDTH/DEPTH

## ESCAPEMENT RECORD

[Counts made by ground surveys are designated by G; aerial surveys by A]

	SURVEYED		PIN	тĸ	СН	JM	OTHER SPECIES	REMARKS
Date	Miles	Ву	Live	Dead	Live	Dead	Live	
10.10								
1948		77110	2 000					
Sept 20 1954		FWS	3,000					
Sept 20		FWS	2,000					
1955			•					
Sept 5	G 0.5	FWS	2,000					4,000-5,000 pinks at mouth
Total fall	l run	FWS	15,000					
1956								
Sept 20	0.5	FWS	1,100		450			400 pinks at mouth
Oct 4	0.5	FW5	2, 100		600			100 pinks at mouth
1957								
Aug 20	A falls	FWS						1SO fish seen
1958								
Aug 31	G 0. 2	FWS						No fish in stream; 6 pinks
								and 8 chums in tidal zone;
								800 pinks and 50 chums
								off mouth
1959			=00					600
Aug 17	A 0.5	FWS	700					600 pinks in salt water
Aug 27	G 0.05	FWS	50					
1960								
	No record							
1961	VI. manand							
1962	No record							
	No record							
1	No record							



Created in 1849, the Department of the Interior—America's Department of Natural Resources—is concerned with the management, conservation, and development of the Nation's water, fish, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

